
Local Momentum for Global Governance: The Management of Transboundary Pollution


The Baia Mare Cyanide Spill, Romania 2000

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EXECUTIVE SUMMARY

On the evening of January 30th, 2000, an estimated 50 to 100 000 cubic meters of wastewater, containing high concentrations of cyanide and heavy metals, spilled from the Aurul S.A. Baia Mare Company's tailing dams to the nearby Sasar river. The plume of pollution then spread into the Tisza river, and proceeded across the Romanian border, to Ukraine, Slovakia and Hungary. No human health impacts were reported, but the aquatic life of the Tisza river, and the whole ecosystem built around it, suffered serious damage as a result. Initiatives proliferated in the wake of the accident and in the months following it, and were very diverse in approach, objectives and shape. Initiatives were launched by a variety of actors, putting forward different mechanisms to deal with one or a number of the problems that were highlighted by the accident, and this at all levels of governance.

The objective of this study is to analyse the process through which such crisis-management mechanisms emerged, and were structured, in order to inform the strategy of actors faced with similar issues. It emerges from the study of the Baia Mare spill that the way an issue is framed is determinant for the way it will be managed, and that such a framing is the result of a political choice. It follows that different frames will lead to different strategies and results, and that policymakers should therefore strategically choose the frame that they will use. The pollution of the Tisza river was initially framed as a national security issue by governmental representatives, civil society groups and populations, from both Hungary and Romania. This security framing, while promoting the issue of the Baia Mare spill to the top of both states' national agendas, had the effect of escalating the political tension between the two countries, and making cooperation arduous. Instead, officials from both countries managed to displace the issue to a different frame, centred around the environmental/ technical dimension of the spill. This shift translated into the transfer of the management of the issue to technical and legal experts, which de-escalated the political tension between both countries and opened up political space for a variety of actors, and particularly environmental NGOs, to launch initiatives directed at the management of the spill.

Beyond the process of emergence of crisis-management mechanisms, the study of the Baia Mare spill also illustrates the importance of the overall structure of such mechanisms. In this case, the proliferation of initiatives itself was beneficial to the management of the crisis, for the spill, like most cases of environmental crises, was a

complex issue requiring knowledge in the legal, scientific and technological fields, and thus benefiting from the variety of initiatives taken. The way those initiatives then related to each other was also crucial. Some coordination mechanisms were set up during the crisis but the limitations that were apparent in the overall management of the spill emphasise the need to promote multi-stakeholder processes, which ensure a better coverage of the wider social, economic and cultural dimensions of the environmental crisis and thus increase preparedness for future similar situations.

Finally, this study acts as yet another reminder of the strong linkages existing between the local and global levels in the environmental sector. The geographically circumscribed accident at Baia Mare had global dimensions, through its illustration of the dilemma between economic development and environmental protection, and the political momentum that developed in its wake spread to higher levels of governance, stimulating the creation of global governance mechanisms.

As a result of this study, the Health and Environment programme of Ifri puts forward the following recommendations. One should not wait for accidents to happen to get prepared, generate momentum for action and initiate multi-stakeholder processes of action. Water pollution, when it cannot always be prevented, can be better managed and dealt with when efforts are made to prevent and prepare for it.

WATER POLLUTION PREVENTION

- Identify and map all “hot spots” and make information public; encourage the remediation projects on designated “mining hot spots”. Raise funding based on the previous experiences.
- Promote awareness and open debates at the local, regional and global levels on critical environmental problems and on the future development of mining sites – See the design of the Tisza Integrated River Management plan, due in 2009.
- Promote diplomatic endeavours and debates on transboundary industrial hazards, such as the ratification of the Liability Protocol and of environmental protection agreements with neighbours.
- Encourage the review process of national laws and regulations on mining, by incorporating social and environmental standards in trade agreements and in national investment policies in this field.

- Encourage all investors to apply self-conduct “Principles of governance”; promote the implementation of the report: “Mining for closure”.
- Support the funding of new pilot projects, in the Upper stretch of the Tisza for example.

WATER POLLUTION PREPAREDNESS

- Keep up and develop early warning system/ accident emergency warning systems; ensure good technical cooperation at the operational level on a national, regional and international scales to prevent, manage, and remedy cases of water pollution; organise table-top simulations and real-life exercises regularly to test and improve the early warning systems and the cooperative working framework.
- Identify experts and include them in interstate dialogue and public awareness programmes. Organize professional training workshops for civil servants and local representatives.
- Develop civil protection preparedness programme, such as the UNEP APELL programme
- Develop, in advance, a system for data collection directly linked to the early warning system.

MANAGING TRANSBORDER POLLUTION CASES

- Make information about transboundary environmental cases public as fast as possible.
- Provide strong political support to efforts made to manage the pollution, but coordinate action with the operational personnel and work to prevent the securitization of the issue.
- Make sure the momentum to deal with the case of pollution is maintained until the hot spots have been dealt with.

INTRODUCTION

The reactions that followed the reports of toxic spills and of the accidental release of uranium into the ground water at the French Tricastin nuclear facilities on July 17th, 2008 are a reminder of the potential of industrial accidents to create political momentum for action.¹ The potential health and environmental impacts of industrial accidents generate a lot of anxiety, and explain in great part why and how such events can give birth to periods of great political tension. Subjected to close media scrutiny, cases of industrial accidents often trigger passionate debates over technologies and industrial policies, as well as emotional responses associated with the fear of technology's harmful consequences.

According to the mainstream literature on environmental security, such accidents can eventually break into open conflict. The causal chain here would have the industrial accidents generate environmental changes, which in turn would bring about resource scarcity, a worsening of living conditions and eventually conflict.² We do not support this analysis³ and think that such simple linkages do not exist. Transboundary water pollution caused by industrial accidents is considered to be a good field of study insofar as accidents are as much "sites" as "objects" of politics,⁴ because they embody the relationships between technical risks and political power.

A local phenomena by definition, industrial hazards also represent global threats, all the more so if they impact water resources and international river systems, because of the complex interactions at play in the water cycle. Ken Conca, a water specialist, underlines that the threats to river ecosystems qualify as "global" problems, demanding "global governance". According to him, river water ecosystems

share a triple meaning: they are critical ecosystems with both local and global significance; they are important sources of community livelihoods and cultural meaning

¹ The author wishes to thank all the anonymous critics that reviewed this work, including those who participated in the discussion workshop organised by Ifri on September 16, 2008.

² See the working programs of Gunther Bächler, ENCOP Environment Conflict Project and Thomas Homer-Dixon, ECACP Environmental Change and Acute Conflict Project.

³ See A. Leboeuf, E. Broughton, "Securitization of health and environmental issues: process and effect. A research outline", *Document de Travail*, Ifri, May 2008.

⁴ See S. Jasanoff, "Technology as a site and object of politics", in R. E. Goodin, C. Tilly (ed.) *The Oxford Handbook of contextual political analysis*, Oxford University Press, 2006, pp. 745-763.

*for millions of people; and, in an increasingly global world economy, they are marketable international commodities, either as natural resources goods or ecotourist services.*⁵

In many cases, like the Baia Mare case (Romania, 2000) that we are focusing this study on, a wide range of actors get involved: the victims, their political representatives at the local and the national level, local community associations, competent technical agencies and administrative bureaucracies, NGOs, affected economic sectors, the company and industry sector under scrutiny, existing regional cooperation frameworks and international organisations in charge of the issues at stake. All these individuals or groups of individuals often take part in the dispute about the facts of the accident, and the degree of the damages. They can demonstrate and launch campaigns. They can also set up new programmes or decide on policy tools to prevent future accidents. Like in the Baia Mare case, a lot of initiatives can develop, targeting local communities, the polluter or a whole industry sector (here the extractive industry), as well as the legislator (at a national or regional level, here European).

A great number of initiatives proliferated after the spill, and we will argue that the Baia Mare accident created a political momentum for the launch of innovative initiatives, which in turn contributed to the development of global environmental governance. Our concern in this study is to understand the politics and the institutional governance mechanisms that emerged from a local phenomenon described as “clearly one of the major river disasters that has happened in Europe in the last decade”.⁶ We want to see how the governance mechanisms that were initiated could influence both the management of the issue at hand, and the reduction of the global threats highlighted by the accidents.

In 2000, the former secretary general of Hungary’s Academy of Sciences declared after the Baia Mare accident: “This tragedy should become a case study for developing an international approach to restoring ecosystems and for preventing such disasters from happening in the future.”⁷ Many initiatives have shared these objectives and we will be examining to what extent they could fulfil the double objective of managing the issue of transborder water pollution caused by an industrial accident, and bringing about new governance tools and cooperative strategies.

⁵ See K. Conca, *Governing water. Contentious Transnational Politics & Global Institution Building*, Cambridge, The MIT Press, 2006, p. 6:

If we think of the natural world not only as a spatial distribution of locales but also as a set of life-supporting natural cycles and ecosystem services, the genuinely global dimension of local ecosystem health becomes apparent.

⁶ A. Mutler, “We want answers”, *Adelaide advertiser*, 19 February 2000.

⁷ *Environment*, “A grim wake-up call”, 1 June 2000, Vol. 42, n° 5.

We will first present the facts on the Baia Mare accident, bringing in similar cases of mining accidents and transboundary water pollution to shed a broader light on the global threats and issues at stake. We will then focus on the main characteristics of the Baia Mare case to better understand the governance mechanisms that have emerged from it.

The point we want to make throughout this study is that defining the accident either as a “security issue” or an “environmental problem” had an influence on the way the crisis was handled, as well as on the strategies adopted by various actors. This point was made by looking beyond the inherent limitations of governance schemes, at the creative pathways taken by international organisations, NGOs and independent experts to influence policy-making processes.

The report is based both on desk assessment and field work. For the empirical study, we interviewed representatives of international and regional organisations, officials from the national administrations and NGOs members. We visited them in Vienna, Bucharest, Budapest, Brussels and Paris, and some were contacted by phone (see the list of interviews in Annex 2).

TRANSBORDER POLLUTION: A COMPARATIVE ANALYSIS OF THE BAIJA MARE ACCIDENTAL SPILL

BAIA MARE: ASSESSED IMPACTS

The Baia Mare accident⁸ occurred in the evening of January 30th, 2000 at the Aurul S.A. gold mining site.⁹ Baia Mare is the largest city of the Maramures region, located in the North West of Romania (500 km from Bucharest), one of Romania's most important mining areas.¹⁰

The facility¹¹ reprocessed mining tailings from old deposits in order to extract the residual traces of gold and silver from old waste stockpiles, originally mined by the Romanian mining state company REMIN many decades earlier. Cyanide is one of the few chemicals dissolving ore in water that is available at a low cost,¹² which explains

⁸ See the UNEP/OCHA Assessment Mission, "Spill of liquid and suspended waste at the Aurul s.a. retreatment plant in Baia Mare", *Final Report*, Geneva, March 2000 and Baia Mare Task Force, "Report of the International Task Force for Assessing the Baia Mare Accident", December 2000.

⁹ Operations started in the summer 1999 in a new facility.

¹⁰ See K. Burnod-Requia, "Rapid Assessment of the Tisza river basin", UNEP/ROE and UNEP/DEWA/GRID-Europe, Geneva, UNEP 2004.

¹¹ The company is a joint venture between Perth-based Esmeralda Exploration (Australia and the Romanian state precious-metals mining company, REMIN). See D. Clifford, "Rosia Montana -- Romania's super pit?", *Mining Magazine*, 1 November 1999.

¹² In gold mining, a dilute cyanide solution is sprayed on crushed ore that is placed in piles, commonly called heaps, or mixed with ore in enclosed vats. The cyanide attaches itself to minute particles of gold to form a water-soluble, gold-cyanide compound from which the gold can later be recovered. In the extraction of non-precious metals, such as copper, nickel, cobalt, and molybdenum, cyanide is used in

its wide use in gold and silver processing. The operating process had been designed to operate in closed circuit, the cyanide-containing waters being re-used after solids sedimentation in the Aurul pond. Due to a combination of heavy rain and thawing snow and flaws in the dam design, the sludge waste composed of an estimated amount of 50 to 100,000 cubic meters of wastewater with high concentration of cyanide and heavy metals spilled from the pond into the nearby Sasar river and subsequently into the Somes river.

From there, the plume of pollution spread into the Tisza river¹³ and crossed the Romania border to reach Ukraine, and subsequently Slovakia, Hungary on January 31st at 6:00 am, and the Federal Republic of Yugoslavia, where the Tisza flows into the Danube, 14 days later. All in all, some 2,000 km of the Danube catchment were affected.¹⁴

The riparian states received early warning via the Romanian local water authority, which allowed some time for water agencies to organise responses. The Accident Emergency Warning System, which had been set up in 1997, and is managed by the International Convention for the Protection of the River Danube-ICPDR, enabled the circulation of the information.¹⁵ Precautionary measures were enacted in Hungary: bans on drinking water and on fishing, closure of the water treatment facility in the Hungarian city of Szolnok, closure of side-arms of the river, temporary closure of the Tisza lake dam to mitigate the impacts of the spill.

“No human health impacts were detected”, but serious damages to the livelihoods in the fishing¹⁶ and tourism sectors, mainly in the Hungarian middle section

the milling and concentration processes to separate the desirable metals from the wastes. Consequently, cyanide and related compounds often are contained in mine tailings. See UNEP information platform-Mineral Resources Forum <www.mineralresourcesforum.org>, accessed 2 July 2008.

¹³ Tisza or Tisa, The Tisza River Basin, with a total surface of 157,186 km², is the largest sub-basin in the Danube River Basin. The Tisza River is the longest tributary of the Danube (966 km), and the second largest by flow, after the Sava River.

¹⁴ See < www.icpdr.org >, accessed in May 2008.

¹⁵ The ICPDR Danube is a transnational body, whose secretariat sits in Vienna, Austria. It was created in 1998 to implement the Danube River Protection Convention which had been signed in 1994 in Sofia. Considered as “the major legal instrument for cooperation and transboundary water management in the Danube River Basin”, it is also the Platform in charge of the coordination of the EU Water Framework Directive (2000).

¹⁶ “Cyanide is about one thousand times more toxic for fish than for humans. Doses of 0,03 mg/L can be fatal and 0.2 mg/L kills most fish species. This sensitivity makes fish excellent markers for the presence of cyanide.” See Angelina W.M.G. Souren, “Weeping rivers: Cyanide Spills in Romania”, *The Chemical News*, July 2000, n° 104, pp. 14-18 .

of the river, were reported by the International Baia Mare Task Force.¹⁷ Pekka Haavisto, head of the UN Environment Programme's Balkan task force sent to assess the damages declared that "The accident has resulted in a catastrophe for aquatic life, flora and fauna."¹⁸ The UNEP Mission gave an "estimated amount of dead consumable fish of 1240 tons."¹⁹

All the scientific assessments note, however, that the timing of the accident was fortunate, as the ice that covered the river limited the impacts of the pollution, and as the winter months, during which the accident took place, are a quiet period for the aquatic life-cycle. Finally, the severe flood²⁰ that occurred shortly after the spill contributed to the dispersion of the pollution. In April 2000, the Hungarian Lower Tisza Valley Environmental Inspectorate declared that "each flood is a blessing for the flora and the fauna of the rivers... the month-long high water on the Tisza river is revitalizing an ecosystem that was decimated earlier this year by cyanide and lead spills".²¹

It is important to bear in mind that accidental spills had already occurred in the past. According to Péter Kovács, Deputy Head of Department of River Management and Water Protection in the Hungarian ministry of Environment and Water, rivers had already been polluted.²² But pollution had decreased in overall terms in the 1990's, as a lot of the mines in Romania closed for economic reasons. The accident that occurred in Baia Mare stood out because of its shocking effects, and because it was the most serious accident to happen in years, according to the same official. For the first time, the massive number of deaths in the fish population was making the accident, and its impacts in terms of pollution of the water, visible. Furthermore, the occurrence of another series of accidents originating in March 2000 in Baia Borsa, an

¹⁷ See Baia Mare Task Force, "Report of the International Task Force for Assessing the Baia Mare Accident", *op. cit.*; and *European Report* "Danube-Baia Mare task force says the rules must be tightened up", 20 December 2000.

¹⁸ J. Terzieff, "Romania counts the cost of cyanide river disaster", *The Sunday Times*, 20 February 2000.

¹⁹ See UNEP/OCHA Assessment Mission, *op. cit.* According to the Hungarian deputy state secretary of the Ministry of the Environment, the cyanide pollution killed - in part or entirely - 38 species (out of the 64 recorded), including 10 that were protected (out of 21 recorded) See *BBC Monitoring*, "Environmental official says cyanide spill killed 38 fish species", 16 March 2000.

²⁰ "The early March floods were among the worst in Hungary's history, with record high levels of flood water on the Upper Tisza River in the east of the country." See K. Fenyo, "Hungary struggles to control constantly worsening floods", *Green Horizon*, Vol. 10, n° 2, July 2001; and *Green horizon*, "Central and Eastern Europe floods apparently part of worsening trend caused in part by environmental degradation", Vol. 4, n° 14, 14 August 2002.

²¹ E. Balazs, "Floods revive poisoned riverway", *Budapest Sun Online*, 4 May 2000.

²² Interview with Péter Kovács, Budapest, 24 June 2008.

isolated mining site near the border with Ukraine,²³ served to reinforce and sediment the fears of the populations as some 20,000 tons of sediments loaded with heavy metals were released into the Novat river, a tributary of the Viseu and the Tisza rivers.

EXAMPLARY NATURE OF THE CASE

At first sight, this Romanian accident appears to be a rather simple case; because the Potentially Responsible Parties²⁴ are identified, because there were no human health impacts or other major acts of unethical corporate complicity,²⁵ and finally because a functioning early warning system allowed for preventive measures to be taken. It should be noted that the tailings dam failure we focus on occurred in a working mining facility,²⁶ and not in an orphaned²⁷ or abandoned²⁸ site, which made it easier to find adequate interlocutors during the management of the crisis. Moreover the case benefited from an extensive mediatic follow-up, boosted by the symbolic dimension of cyanide poisoning,²⁹ which made policy reactions quite inevitable. Finally, the case that we are studying refers to a threat posed to the *quality* of water resources rather than the *quantity* of such resources, when the latter cases are considered to be the most sensitive in terms of negative security implications.

²³ The majority of heavy metals ended up being deposited in the upper reaches of the river. See ICPDR, Water Resources Center Plc. (VITUKI Rt.), "Joint Danube Survey: investigation of the Tisza river and its tributaries", *Final report*, prepared by the Institute for Water Pollution Control, May 2002.

²⁴ Terminology used by the US Environmental Protection Agency. See the official website www.epa.gov, accessed 27 September 2008.

²⁵ For a critical analysis of mining industry's wrongdoing see "War on Want, Fanning the Flames. The role of British mining companies in conflict and the violation of human rights", November 2007, www.waronwant.org/?lid=15142, accessed 27 September 2007. Note that the report was used by the Norwegian Wealth Fund to exclude Rio Tinto from his investment portfolio for "grossly unethical conduct". See T. Macalister, "Ethical business: Norway ejects mining giant Rio from its pension portfolio", *The Guardian*, 9 September 2008.

²⁶ That is in contrast with the fresh outbreak of artisanal small scale mining, which poses problems of occupational health, safety and environmental protection.

²⁷ Mines for which the responsible party no longer exists or cannot be located. See P. Peck, "Mining for closure. Policies and guidelines for sustainable mining practices and closure of mines", ENVSEC, 2005.

²⁸ Mines where rehabilitation is incomplete but whose legal owners still exist. *Ibid.*

²⁹ Using mercury in mining process is also a dangerous process (soil contamination, air emissions entailing serious health impacts), as exemplified by the accident that occurred in Peru in the Yanacocha mine operated by Newmont Mining Corporation. See www.mineralresourcesforum.org/incidents/Cajamarca/index.htm, accessed 28 September 2008.

This first impression of a rather “exotic” and simple case gets easily dismissed insofar as the case epitomises most of the socioeconomic controversies that surrounds the highly emblematic resource that water is; it embodies the dilemma at play in the contemporary environmental crisis. The main point of interest is that, in spite of the relatively limited consequences described above, the Baia Mare spill did trigger both security discourses, and a call for cooperation which, in the Central European historical context but also political and economic transitional times, has an exemplary nature. The fact that, as we will see, the scientific consensus on the causes and consequences of the accident could be reached rather easily did facilitate the analysis of the actions undertaken, justifying the choice of our case study.

However, the apparent “simplicity” of the case should not elude the fact that responsibility still remains an open question because of previous chronic river pollution; that conflicts of interests did break out between social groups and collective actors, and most of all, that the circumscribed January 2000 pollution plume that contaminated the regional watershed of the Danube river bears social, economic and cultural dimensions that have a global resonance. Furthermore, when facing environmental problems, cultural studies remind us that contradictory certainties coexist, that is “several divergent and mutually irreconcilable sets of convictions both about the difficulties we face and the available solutions”.³⁰

One reason why the Baia Mare case bears such a potential for generalisation lies in the fact that Baia Mare came to illustrate most of the issues at stake in the attempt to combine economic development with environmental protection. By shedding light on the potential hazards of mining for regional water resources, not only did the Baia Mare case open Pandora’s box, but it also came to expose the dangers of technological failures on mining sites. Thus, the case also became one of the potent counterexamples pushed forward to deter new mining developments, first in Romania, as we will see in the Rosia Montana gold mine project, and more widely in countries where gold mining projects are being developed, such as Bulgaria and Slovakia.³¹

Many of the investments made in the mining sector are being made by junior companies with limited credentials and experience, such as the Australian company who settled in Baia Mare and is now being held responsible for the cyanide spill. These new actors are a symbol as well as a consequence of the modern gold rush,

³⁰ See J.A. Hannigan, *Environmental sociology. A social constructionist perspective*, London, Routledge, 2002, p. 29.

³¹ See *Reuters* “Bulgarian minister must decide on gold-mine court”, 26 April 2007; M. Durianova, “Gold issue returns to Kremnica”, *The Slovak Spectator*, 19 December 2005.

stimulated by the rising price of the precious metal.³² Soaring investments have also re-activated the criticisms raised at the contentious green credentials of the extractive industry, and its negative impacts on the environmental sector.³³ These elements all serve to reinforce the exemplary nature of the Baia Mare case. One should also keep in mind that this accident also came to encompass the spills that originated in March 2000 from another state-owned mine, Baia Borsa. As we will see later, the lumping together of these accidents, which have different characteristics, while shedding the emphasis on the degraded local Romanian situation, tended to mask the more global issues at stake within the mining sector, such as the pressing challenge of hot spots remediation, its problematic financing and the risk governance for future developments.

In our comprehension of the global implications of the Baia Mare case, we share the assumptions of the researchers who adopted a critical view on the linkage between water scarcity and security in the emblematic Middle East, such as Mark Zeitoun from the LSE or Tony Allan from King's College of London, whose studies bridge the gap between the study of water *quality* cases, and water *quantity* ones. In line with these studies, we consider that political and policy studies have a lot to contribute to the understanding of a domain where legal experts and scientists reign, and yet that social scientists should also, on their part, explore the black box of technology.³⁴ We also believe that conflictual and cooperative responses to a crisis over water resources should not be dichotomised. Mark Zeitoun explains that “the polarised view leaves little space for the more complex set of factors and politics that come with the territory of being linked by a water resource”.³⁵ We will show in this study that if no conflict broke up, and if the securitization of the issue should be put into question, tension remained a strong structuring feature of the crisis, which should not be overlooked. Conversely, if cooperation did occur and prevail in the management of the Baia Mare crisis, many schemes remain to be implemented, or are leaving pressing problems unsolved. This highlights the fact that not all forms of cooperation bring actual changes. For instance, if the UE pre-accession status of the countries involved certainly played a part in the smooth handling of the crisis, the EU's

³² See Y. Eudes “California: la nouvelle ruée ver l'or”, *Le Monde*, 12 September 2008.

³³ See L. Sevier, “The Gold Standard”, *The Ecologist*, 17 April 2008.

³⁴ Neither “hydro-centricity” which excludes the considerations of political determinant, nor “hydrology-blindness” which is also dysfunctional. See T. Allan, “Watersheds and problemsheds: explaining the absence of armed conflict over water in the Middle East”, *MERIA Journal*, March 1998, Vol. 2, n° 1. See the cooperative work of the School of Oriental & African Studies with the King's College of London, <www.soas.ac.uk/research/our_research/projects/waterissues/>, accessed 27 September 2008.

³⁵ See M. Zeitoun, N. Mirumachi, “Transboundary water interaction. Reconsidering conflict and cooperation”, Annual meeting of the International Studies Association, San Francisco, 26-29 March 2008.

predominantly “legal” framing of the issue seems to have deterred governance schemes to some extent, under the argument that Brussels should now be the one paying for the management of the crisis. One should look instead at the combinations that might exist between international cooperation initiatives, formal and informal partnerships and self-monitoring mechanisms at the sub-regional, national and regional levels.

But before tackling the more conceptual matters of this study, it appears important to get back to those implications of mining- or water-related accidents that are generalisable, on a global scale. We want to underline that these global threats, like climate change threats, require an understanding of specific geographical and socio-economic contexts.³⁶

OTHER ACCIDENTS, SIMILAR GLOBAL THREATS

These types of accidents are not, as the chosen case study seems to suggest, specific to Eastern European countries, supposedly plagued by the dismal environmental legacies of socialist regimes.³⁷ Admittedly, a lot of hot spots have been inventoried in the region, but accidents originating from the failing of tailings ponds or the drainage of waste occur worldwide.³⁸

MINING ACCIDENTS

Accidents that bring to the foreground the question of the management of natural resources – and in this case water, are often structured by the tension existing between the two objectives of environmental protection and economic development. These accidents are also global, in the sense that this particular type of accident

³⁶ See the report published by the Norwegian Development Fund, “More than rain. How can the world’s poor cope with the changing climate?”, September 2008, www.utviklingsfondet.no/morethanrain/, accessed 1 October 2008.

³⁷ See Z. Gille, *From the cult of waste to the trash heap of history. The politics of waste in socialist and postsocialist Hungary*, Bloomington & Indianapolis, Indiana University Press, 2007.

³⁸ See a chronology of major tailings dam failures at: < www.wise-uranium.org/mdaf.html>, accessed 27 September 2008.

happens everywhere with no geographical discrimination, generating similar effects and reactions. They can produce large-scale indirect impacts because the impacts of such accidents are mobile, travelling via air flux or watercourses. In mining accidents, soil, surface and groundwater can be contaminated, as well as the air, polluted by the toxic residue dust that gets blown off, or by the emission of smelters. In 1992, in the USA, an accident similar to that of the Baia Mare spill occurred as a dam holding cyanide-laced water spilled from the Summitville gold mine into the Colorado river. The whole of the Alamosa river's ecosystem was wiped out within 27 km of the mine.³⁹ In Northern Sweden, following the collapse of a mining waste dam at Boliden's Aitik copper mine on September, 11th 2000, contaminated water was released into the Vassara River.⁴⁰

In April 1998, a tailings dam located at Aznalcóllar in Southern Spain burst due to a landslide on the grounds of a lead and zinc mine, run by a division of the Swedish-Canadian firm Boliden. More than five million cubic meters of toxic waste were released into the Guadiamar River. Diversion work was organised to prevent the contamination of the Doñana park (a World Heritage site since 1994). Five to seven thousands hectares of crops were damaged and many birds and fish were killed (15 tons of dead fish, eels, crabs and frogs were recovered from the river in a week).⁴¹ Farmers growing rice, fruit and vegetables along the rivers were the most affected. The clean-up costs reached \$100 million and were covered by the Spanish authorities, the European Union and the mining company.

These accidents highlight the dangers of some of the technologies used in the processing of ore. Cyanide technology, for example, which is used in gold and silver mining activities, has as its main component a fast acting poison for the human body.⁴² The use of such toxic substances is condemned and challenged by local communities and NGOs,⁴³ which point to the health and environmental risks linked to their use.⁴⁴ The environmental impacts on water are a major concern in mining

³⁹ See the information collected on the website Mineral Resources Forum, www.mineralresourcesforum.org/incidents/Losfrailes/index.htm, accessed 2 July 2008.

⁴⁰ *Environment News Service*, Swedish Mine Spill Prompts Calls for Stricter EU Law", 11 September 2000.

⁴¹ *AFP*, "Boliden boss summoned over Spanish park pollution", 6 May 1998.

⁴² See < www.mineralresourcesforum.org >, accessed 2 July 2008.

⁴³ See R. Moran, "Cyanide uncertainties. Observations on the chemistry, toxicity and analysis of cyanide in mining-related waters", Mineral Policy Center, *Issue paper*, n° 1, 1998.

⁴⁴ See L.H. Ford, "Challenging the global environmental governance of toxic waste: social movement agency and global civil society", in D.L. Levy, P. J. Newell (eds.), *The business of global environmental governance*, Cambridge, The MIT Press, 2005, pp. 305-328.

activities. Water is indeed called by NGOs “mining’s most common casualty”,⁴⁵ and of all industrial hazards, mining accidents rank among the major sources of water pollution.⁴⁶

WATER AND SECURITY: A QUESTIONABLE LINKAGE

In our view, the strength of the reactions that emerged after the Baia Mare accident had a lot to do with the fact that the spill was perceived as a threat to water resources, and that the dead fish were there to prove it. But Baia Mare,⁴⁷ like the Sandoz river accident that contaminated 500 km of the river Rhine in 1986,⁴⁸ or the Harbin accident that occurred in November 2005 in the Songhua River in Northeast China and contaminated Russia,⁴⁹ were only acute symptoms of a chronic and long term environmental pollution. Harm Oterdoom, the Secretary general of the International Commission for the Protection of the Rhine, underlines that by the end of the sixties, the Rhine river already had the reputation of being the sewer of Europe.⁵⁰

Expectedly, these accidents catalysed a lot of attention and enhanced many pre-existing policy measures, or stimulated new ones. One expert underlines that “The Sandoz accident led to further reduction of the pollution and rehabilitation of the Rhine eco-system”.⁵¹ In the Songhua river, the Chinese and Russian authorities have officially pledged to cooperate closely to handle the pollution of the Songhua River.⁵² One of the factors affecting the launch of initiatives, and the scope of the reactions, relates to the way industrial risks are framed.

⁴⁵ See “Acid mine drainage. Mining and water pollution issue”, Wild and Environmental Mining Council of British Columbia, < www.miningwatch.ca/updir/amd.pdf >, accessed 23 July 2008.

⁴⁶ See E. Mühlenhover, “Social movements and the transborder chloride pollution of the Rhine river”, *Proses Les Cahiers*, July 2001, n° 2, pp. 4-34.

⁴⁷ *Central Europe Online*, “Cyanide spill among worst river pollution says UN”, 19 February 2000.

⁴⁸ Accident caused by the spill of agricultural chemicals into the river after a fire damaged a warehouse. See A. Mutler, “We want answers - Angry commissioner tours areas affected by cyanide spill”, *Adelaide Advertiser*, 9 February 2000.

⁴⁹ E. Economy, “The lessons of Harbin”, *The Time*, 27 November 2005. See E. Economy, *The river runs black. The environmental challenge of China’s future*, Ithaca, Cornell University Press, 2004.

⁵⁰ H. Oterdoom, “From use and protection to sustainable development: the river Rhine, a case study”, Presentation to the conference organised in Lyon, 6-8 June 2001, “Lyon-fleuves-2001”, Agence de l’Eau Rhône-Méditerranée-Corse, < eaurmc.fr/lyon-fleuves-2001 >, accessed 14 July 2008.

⁵¹ P. Huisman, “Learning by doing. Experiences with sudden occurring pollution in the Rhine basin”, presentation, 5th international summer school on the environment, Girona University, Figueres, Catalonia (Spain), 14-18 July 2003, < <http://insma.udg.es/isse2003> >, accessed 14 July 2008.

⁵² GOV.cn [Chinese government official web portal], “China, Russia to cooperate on water pollution”, 25 November 2005, accessed 10 July 2008.

Ken Conca underlines that water pollution accidents rank especially high in the hierarchy of environmental concerns because “water is high politics”.

It is rightly perceived as an absolute necessity in the very near term. If other environmental concerns are understood as a long-term threat, luxury goods, or issues unrelated to economic development and people's livelihoods, they may not have the same energizing effect.⁵³

It follows that even though cases of transboundary water pollution appear in geographically circumscribed areas, the environmental dimension of such cases “have profoundly global implications through their cumulative impact on key global systems and cycles and their increasingly far-flung reverberations across a densely interconnected social world”.⁵⁴

Accidents affecting rivers, which are watercourses, but also serve as drainage basins and host freshwater ecosystems, have an impact on the whole set of critical links that exist between water quality, land use and regional development. They have to be understood within the “broader and more complex socio-ecological systems of rivers”⁵⁵ and for this reason, they cannot be considered a direct and automatic cause of “environmentally induced conflict”,⁵⁶ as the mainstream literature on environmental security suggests on the basis of the causal chain already mentioned. Rivers are “sites” and “objects” of politics, as well as geographical facts.

A typical presentation of the security dimension of water that we criticize is the following: “

⁵³ K. Conca, G.D. Dabelko (eds.), *Environmental peacemaking*, Baltimore, John Hopkins Press, 2003, p. 223.

⁵⁴ K. Conca, 2006, *op.cit.*

⁵⁵ *Ibid.*, p. 214.

⁵⁶ See T. Hagmann, “Confronting the concept of environmentally induced conflict”, *Peace, Conflict and Development*, n° 6, January 2005.

*Despite the absence to date of full-scale water wars, unresolved tensions over water have persistently irritated relations, fuelled other hostilities, and occasionally led to military action that risked provoking a larger conflict.*⁵⁷

Peter Gleick, one of the leading experts on water issues, advocates a close linkage between water and conflict. For him, a “geopolitical reality of disputes over shared waters”⁵⁸ exists because of geographical facts.

These rather schematic explanations do not resist a close examination, as many critics⁵⁹ have already pointed out. Contrary to this neo-malthusianist approach, Nancy Peluso and Michael Watts underline the need to effectuate a detailed analysis of every phenomenon, as each case is rooted in local histories and specific social relations, and yet “connected to larger processes of material transformation and power relationships.”⁶⁰ For this reason, one should not expect the reactions to cases of transboundary water pollution to be necessarily and automatically conflictual, but should subject such cases to further critical analysis. The perceptions of danger and the security concerns that tend to be associated with such accidents should not be dismissed, but rather be conceptualised differently, as political acts to be understood “[with]in a larger social and political context”,⁶¹ and along other political acts related to the coordination of water management around shared river basins.⁶²

For this reason our analysis goes past a state-centric approach to look at initiatives originating from a wide range of actors. It encompasses the political but also the technical dimensions of the problems. We will look at the underlying rationale of the initiatives to highlight their functioning, and the influence that they may have on the policy-making process, to finally analyse what these initiatives, and their interaction, can teach us in terms of governance options.

⁵⁷ S.L. Postel, A.T. Wolf, “Dehydrating conflict”, *Foreign Policy*, September/October, 2001, p. 5.

⁵⁸ P.H. Gleick, “Water and Conflict: Fresh Water Resources and International Security”, *International Security*, Vol. 18, n° 1, Summer, 1993, pp. 79-112.

⁵⁹ See D.H. Deudney, “Environmental security. A critique”, in D.H. Deudney, R.A. Matthew (eds.), *Contested grounds. Security and conflict in the environmental politics*, New York, State university of New York Press, 1999, pp. 187-219; S. Dalby, *Environmental security*, Minneapolis, University of Minnesota, 2002; K. Conca, G.D. Dabelko, 2003, *op.cit.*; K. Conca, “In the name of sustainability. Peace studies and environmental discourse”, *Peace and Change*, Vol. 19, n° 2, April 1994, pp. 91-113; K.T. Litfin, “Constructing Environmental Security and Ecological Interdependence”, *Global Governance*, Vol. 5, n° 3, July-September 1999, p. 359; J. Barnett, *The meaning of environmental security. Ecological politics and policy in the new security era*, London, Zed Books, 2001; T. Hagmann, 2005, *op.cit.*

⁶⁰ N. Peluso, M. Watts, *Violent Environment*, Ithaca & London, Cornell University Press, 2001.

⁶¹ S. Dalby, 2002, *op.cit.*

⁶² K. Conca, G.D. Dabelko, 2003, *op.cit.*

BAIA MARE: BEYOND THE INVOCATION OF SECURITY

In the case of Baia Mare, the spectre of a national security threat was raised by observers who perceived “old fires between Hungary and Romania (...) [to be] rekindled”.⁶³ Yet, a closer analysis invalidates any evidence of a link between damages to the water resources and the breaking out of a conflict. We have observed that in spite of the invocations of a security problem, many governance mechanisms, alternative tools and strategies were initiated to tackle the issues highlighted by the accident – industrial risk governance and prevention of accidental pollution; water and river management (wetland and floodplain restoration, substances, water quality standards, flooding and river basin management).

Tension did build up between Hungary and Romania, the two main protagonists, in the wake of the accident; a tension which was only heightened by the occurrence of new accidental spills in March 2000 at the Baia Borsa mining site. Yet, this tension seems to have been instrumentalised for nationalistic purposes. This would tend to discredit the environmental conflict thesis which posits that such accidents lead, naturally and inescapably, to conflict. In our case study, the visibility of this nationalist line of argument masks the existence of a strong bilateral dialogue between the two countries, geared towards cooperation on the management of the crisis. To avoid a political instrumentalisation of the crisis, which was perceived as a dangerous and counter-productive strategy, the frame used to comprehend the industrial accident was displaced to one centred around the environmental, rather than the political, dimension of the event. The management of the issue was, as a result of this shift in the framework of understanding, handed over to scientific experts. On the basis of our empirical study, we posit that this shift is the result of a strategic choice on part of the actors involved in the management of the industrial spill, just as the preceding choice of a political framing was. None of these two frameworks of

⁶³ “Death of a river”, *The Bulletin*, April 2000, Vol. 9, n° 2, p.16.

understanding can be taken to derive inherently and systematically from the problem at hand. None of these frames of understanding should be reified, nor condemned. On the contrary, it is important to understand what benefits or limits derive from their use, so as to draw useful lessons for policy-makers as they elaborate strategic framework of actions to deal with similar issues.

BUILDING TENSION: A HUNGARIAN-ROMANIAN CASE

The Baia Mare accident is “a major environmental accident, and to the people living by the rivers, this is a catastrophe”.⁶⁴ This declaration of the EU Environment commissioner Margot Wallström made in February 2000 in the wake of the accident shows how difficult it was at the time to describe what had happened.⁶⁵ The results of the assessment mission that we have presented came much later in time, and in the meantime a dispute broke out between Hungary and the mining company working on the Baia Mare mining site⁶⁶ about the degree of the damages caused.⁶⁷ This context of uncertainty concerning the implications of the accident enabled tension to build up between Hungary and Romania, and was heightened by the occurrence of heavy

⁶⁴ A. Mutler, “Romania acknowledges spill severity”, *Associated Press Writer*, 17 February 2000.

⁶⁵ For an interpretation of the differing qualification: incident, accident or catastrophe, see S. Argeseanu Cunningham, “Incident, accident, catastrophe: cyanide on the Danube”, *Disasters*, Vol. 29; n° 2, 2005, pp. 99-128; S. Jasanoff, “New modernities: reimagining science, technology and development”, *Environmental Values*, n° 11, 2002, pp. 253-276:

in controversies over environment and development, people similarly disagree about the meanings they should attach to events (...): rivers and fields drying in successive seasons of drought; fish catches that do not match the hauls that older generations brought in; song birds that do not return to old haunts (...). It could be an act of God, an accident of nature, human greed, or unintentional contamination of natural resources through fundamentally beneficial efforts to meet human needs. The choice of explanation provides insights into a society's deepest moral and political arrangements. The stories people tell to explain unfortunate events are neither whimsical nor unfounded. They are linked in many instances to remembered and continually re-enacted societal commitments about how to apportion authority, acknowledge kinship, express identity, or decide whom to trust and whom to blame.

Ibid, p. 268.

⁶⁶ See the statement of the Australian company Esmeralda, co-owner of Aurul company where the spill occurred: “There is no evidence to confirm that the contamination and the damage said to have been caused is a result of the tailings dam overflow at Baia Mare on January 30th, 2000”, B. Fincziczki, “Suing, restocking in cyanide aftermath”, *Budapest Business Journal*, 21 February 2000.

⁶⁷ Note the regrets expressed by Esmeralda Exploration spokesman, *Associated Press Newswires*, “Australian company blamed for cyanide spill regrets accident”, 17 March 2000.

metal spills from the Baia Borsa mining site.⁶⁸ The main stumbling blocks between the two countries concerned the lack of mining safety⁶⁹ and the question of the responsibility of the Romanian state.⁷⁰

The dead fish, which were the most visible and striking testimony of the damage caused by the industrial spill on the Tisza river, were making the headlines in the international press, which focused mostly on Hungary, where most of the damage had been reported⁷¹. The Tisza river is the second largest Hungarian watercourse, and the plume mainly affected the upper and Hungarian middle stretches, threatening Hungary's Hortobágyi National Park, classified as a UNESCO World Heritage Site and one of the "most diverse freshwater ecosystems where 19 out of Hungary's 29 species of protected fish can be found".⁷² The Tisza's significant position in Hungarian history and literature⁷³ meant that reactions to the accident and the ensuing pollution tended to be emotional. One journalist reported the death of the Tisza river, writing: "Hungary is mourning: the "blond" Tisza is dead. Inspiration for ballads, children's counting rhymes and poems, nurturing animals, plants and people for thousands of years, the river was killed in under a week."⁷⁴ After the massive fish kill, funeral ceremonies were held in riparian villages and cities in Hungary (Tokaj, Szolnok, Szeged) and in the Federal Republic of Yugoslavia. People hung black flags on their houses as a sign of mourning, and warning signs kept people away from the river. In Budapest, a demonstration was organised in which participants walked to the Parliament holding candles and calling for a Europe-wide cooperation on the issue.

⁶⁸ Hungarian commissioner declared that "I can say without exaggeration that data received so far is desperate (...) the metal pollution could burden the river for decades", *AFP*, "Hungary says river pollution "desperate" after latest spill", 16 March 2000.

⁶⁹ "EU experts warn pollution spills could occur again", *AFP*, 17 March 2000.

⁷⁰ EU Commissioner for Enlargement Günter Verheugen said "the polluter pays" principle must be applied in the dispute, "Hungary raises Tisza pollution in Brussels talks", *IPR Strategic Information Database*, 23 March 2000; "Hungarian meeting discusses responsibility for transboundary environmental pollution", *BBC Monitoring*, 24 March 2000.

⁷¹ Slovakia was not so much affected considering how short a stretch of the river flows into the country. For a presentation of the role of the press see REC, "Case study: the Tisza-Szamos cyanide pollution", no date, <www.rec.org/REC/Programs/PublicParticipation/DanubeInformation/Tisza.html>, accessed 27 July 2008.

⁷² *The Bulletin*, "Death of a river", Vol. 9, n° 2, April 2000, p. 20.

⁷³ Interview with Róbert Fidusz, Budapest, 24 June 2008. See the documentary produced and directed by an Australian filmmaker, born in Hungary, Peter Hegedüs, about the struggle of a fisherman: "Inheritance: A Fisherman's Story".

⁷⁴ I. Miro Kiss, "The blond is dead. The Tisza river disaster", *Central Europe Review*, Vol. 2, n° 7, 21 February 2000.

Tins of fish were also thrown on the Romanian embassy in Budapest by local protesters, breaking windows.⁷⁵

The Federal Republic of Yugoslavia also reacted strongly after the accident. It asked for compensation for the damage to the Serbian economy through its Environment minister. The latter declared that "the Tisza has been murdered" and that the accident was "an absolute catastrophe."⁷⁶ After the Baia Borsa spill, authorities called again on the international community to "punish" Romania for its "irresponsibility".⁷⁷ Considering the Yugoslavian government's pariah state at the time however, this appeal was dismissed by the international community; the Kosovo conflict had been and remained the focal point of Belgrade's and the international community's political agenda in the Balkans. This also serves to explain the relative confinement of reactions and actions to Hungary and Romania after the Baia Mare accident.

It is interesting to note that the concentration of public attention on the effects of the pollution in Hungary⁷⁸ was paralleled by a process of stigmatisation of Romania, where the accident, also called the "Aquatic Chernobyl"⁷⁹, originated from. Other mines and waste disposal sites were labelled "ticking time bombs"⁸⁰ by the president of the Environmental Commission of the Hungarian parliament, Zoltán Illés, and the responsibility of the Romanian state, as the co-owner of the Baia Mare mining facilities, was engaged.

Much of the tension that built up between the Hungarian and Romanian Environment Ministers took its root in this issue of the attribution of responsibility. The Hungarian representative, Pál Pepó, claimed that Bucharest could not elude its responsibility as a state when a case of transboundary industrial pollution originated from within its borders. Conversely, Romica Tomescu, his Romanian counterpart, underlined the responsibility, under Romanian law, of the company managing the facility at the origin of the pollution.⁸¹

⁷⁵ *The Bulletin*, April 2000, *op. cit.*

⁷⁶ F. Brigland, "Nothing is alive. Zero", *Sunday Herald*, 20 February 2000.

⁷⁷ E. Szamado, "Hungary, hit a third time by pollution from Romania, demands urgent action", *AFP*, 15 March 2000.

⁷⁸ M. Roddy, "Poison spill wrecks Central Europe", *The Times of India*, 22 February 2000. Note the hunger strike of a local Romanian official to demand the closure of the mine: *BBC Monitoring*, "Deputy mayor criticizes controversial mine – person on hunger strike", 9 August 2000.

⁷⁹ See G. Kosztolányi, "Aquatic Chernobyl, Requiem for the Tisza and the Szamos: Part One", *Central European Review*, Vol. 2, n° 7, 21 February 2000 (Serie of 4 articles).

⁸⁰ *BBC News*, "New toxic spill hits Eastern Europe", 10 March 2000.

⁸¹ *BBC Monitoring Service*, "Regional environmental plan not signed by Romania", 5 April 2000.

Petre Roman, the Romanian Minister of Foreign Affairs, declared in February 2000 during the visit of the European Union representative, Fokion Fotiadis, that: "the responsibility is clear, we have never denied it (...) but guilt is another thing".⁸² The Romanian minister of Environment, Romica Tomescu, denied the accusations made on his country's environmental standards: "Romania is not an ecological time bomb, as it has sometimes been misrepresented".⁸³ After the Baia Borsa spills, he stated that "things are under control now. I want to make it clear that we are not talking about a catastrophe."⁸⁴ Petre Roman ensured that "we knew from the very beginning what happened. We intervened in time, and we communicated."⁸⁵

Romanian authorities, which had been invited on February 15th, 2000 to begin negotiations with the EU on the question of its future membership, appeared very nervous that the accident and the criticisms that were raised against them in its wake would somehow impede on the negotiation process. Some critics voiced some doubts regarding the capacity of the "would-be EU members from the former communist bloc (...) to bring their environments into line with EU standards".⁸⁶ Margot Wallström assured that "the cyanide pollution accident on the Danube River will not have an impact on Romania's talks of accession to the European Union",⁸⁷ but EU experts⁸⁸ stressed the possibility for similar accidents to occur in the future,⁸⁹ and EU officials made it clear to their Romanian counterparts that "a better environment in the European neighbouring" remains a crucial element of the enlargement process.⁹⁰ NGOs like Greenpeace also made political use of this argument, sending out a press release on the need to address Romania's mining problems on the day the accession negotiations began.⁹¹ During all this process, the Romanian government steadily reiterated its commitment to meet EU standards. If the carrot of EU accession certainly acted as an incentive to launch initiatives and adopt a cooperative behaviour in the management of the Baia Mare crisis, one should not overestimate its influence.

⁸² *Reuters News*, "Romania admits responsibility for cyanide spill", 16 February 2000.

⁸³ *Reuters News*, "Romania says no new risk of river pollution", 13 April 2000.

⁸⁴ K. Than, "Hungary criticises Romania in latest pollution case", *Reuters News*, 11 March 2000.

⁸⁵ C. Middap, "Troubled waters", *Daily Telegraph*, 19 February 2000.

⁸⁶ *Reuters News*, "Romania to ask for EU money to close danger mines", 20 March 2000.

⁸⁷ *BBC Monitoring*, "EU commissioner says Romania's EU accession talks unaffected by cyanide spill", 21 February 2000.

⁸⁸ A. Purvis, M. Radu, J. Stojaspal, "Triangle of death: Three factories pollute a Romanian town, stunting the health and lives of its children", *TIME Atlantic*, 9 April 2000. See R. Dascalu, "Romania upbeat after EU environment scrutiny", *Reuters News*, 14 July 2000.

⁸⁹ *AFP*, "EU experts warn pollution spills could occur again", 17 March 2000.

⁹⁰ See the introductory statement of the Environment Commissioner Stavros Dimas <http://ec.europa.eu/environment/enlarg/index_en.htm>, accessed 24 July 2008.

⁹¹ Interview with Anamaria Bogdan, Bucharest, 23 June 2008.

As we will see, many cooperation schemes preexisted the crisis, and the bilateral dialogue proved to be the determining element in the solving of the crisis.

Alexander Zinke, an environmental consultant who has worked on the accidents in the Maramures, confirmed that the Romanian government was put under a lot of pressure during the Baia Mare crisis. He recalls the relief of the Romanian authorities when he found out that, contrary to the accusations of negligence that had been levelled, the local Romanian water authority could produce a list of mining hot spots.⁹²

In parallel, the comparison of the Baia Mare accident with the Chernobyl catastrophe of 1986 became a recurring theme in the international press, which also relayed the most radical discourses emanating from both countries' nationalistic political forces. The accident had turned into a new battlefield for old conflicts.

THE NATIONALIST INSTRUMENTALISATION

István Csurka, chairman of the far-right Hungarian Justice and Life Party-MIEP declared that

the Romanian attack on the water catchment area of the River Tisza is in fact a new type of war – without the rattling of firearms – against the entire Hungarian living space, a long-term threat to our living-space, a deliberate or irresponsible action committed for sinister reasons to liquidate a nation. An offensive war (...) we must recognize historic deliberateness.⁹³

Simultaneously, a Romanian newspaper spoke of an “environmental war”, in reference to the declared intent of the Hungarian Prime Minister to sue Romania for the damages caused by the Baia Mare spill.⁹⁴

Antonela Capelle Pogacean explains that

⁹² Interview with Alexander Zinke, Vienna, 18 June 2008. See *BBC Monitoring*, “Romania compiles list of 40 potential sources of Hungarian river pollution”, 5 July 2000.

⁹³ *BBC Monitoring*, “Romanian pollution a war against Hungarian “living-space” - far-right leader”, 21 March 2000.

⁹⁴ B. Fincziczki, “New toxic spills from Romania hit Tisza”, *Budapest Business Journal*, 20 March 2000.

*nationalist discourses in Budapest and Bucharest both consider the Hungarian-Romanian relationships to be characterized by ancient hatred. Yet, the theory of a conflict that would have opposed the two countries since the beginning of time is just wrong.*⁹⁵

suggesting that the aftermath of the Baia Mare accident had become yet another battlefield for the nationalist political forces to expose their political positions. This political instrumentalisation even went so far as to give grounding to exaggerated interpretations of the accident as the proof that “war wounds give way to pollution”.⁹⁶

A dossier published on the controversial topic of pollution by the French newspaper *Courrier International* gives a good representation of the typical nationalist bias associated with the Hungaro-Romanian relationship. The weekly newspaper quotes the Romanian newspaper *Adevarul* saying “the psychosis had been supported by the Hungarian media not to mention the hysteria of the rightist newspapers”, and recounts the parallel drawn by the World Union of Hungarians/Magyars between the lack of interest given to the “most serious ecological catastrophe of history” and the division of the Habsburg empire to the detriment of Hungary at the Versailles peace conference of 1919.⁹⁷

Opposing this nationalist lens, which made apparent a “historical wilfulness in the background of events”, according to politician István Csurka, was the Hungarian government, which put a greater emphasis in its understanding of the event on the technical and environmental issues relative to the accident and its effects. This shift of focus, which resulted in the adoption of environmental/technical framework of comprehension, appears to have played a decisive role in defusing the tension between Hungary and Romania.

⁹⁵ On Hungarian-Romanian relations, see A. Capelle-Pogacean, “Les relations hungaro-roumaines et la question des minorités magyares”, *Etudes du CERI*, n° 12, January 1996, p. 5.

⁹⁶ B. Miller, “Blue Danube sputters back to life as wars and disputes recede”, *The Independent*, 28 May 2002.

⁹⁷ *Courrier international*, “Le cyanure du Danube: un poison politique”, n° 484, 15 February 2000.

THE ENVIRONMENTAL/TECHNICAL TRUMP CARD

In this section we will show how the environmental/technical framework took over the political one, and suggest some reasons why this shift was made possible. We will also point briefly to some of the – proven and potential – limitations of such an approach, a subject we will develop further in the following chapter of this study.

What needs to be carefully considered here are the effects of the framing of the Baia Mare accident as a “security”, high politics issue, which resulted from the political instrumentalisation of the accident. This securitization of the accident appears to have hindered its management insofar as parties tended to adopt defensive attitudes. The tension that thus emerged between the two protagonist countries was more a result of their long history of enmity than of the actual accident, which only really highlighted the lack of scientific and technical knowledge on the mining industry and the risks associated with it.

The governments, however, did not use the accident and the tension that emerged from it as a fig-leaf for other claims, be they territorial or relative to the Hungarian minority living within Romanian territory. Rather, recognizing that their disagreement centred on the assessment of the causes of the accident, the degree of damages caused and the potential dangers of other mining facilities, the governments of both countries appealed to the scientific and technical communities to manage the crisis. Independent expertise was requested to assess the situation, and both countries’ authorities cooperated at the operational level to manage the crisis. This resulted in a shift in the way the Baia Mare was presented. A different frame was adopted, based on the rationale that ‘objective’ science was the answer. For the purpose of this study, we will call this framing “environmental/technical framing”, to differentiate it from the original “security” framing, and because an “environmental” issue, in opposition to a “political” issue, carries with it a strong non-partisan connotation.

The strategic shift in favour of a more neutral scientific focus appears to have contributed significantly to the defusing of the tension. However, and as we will see when studying a different mining development project, such an “environmental” framing can show its limits, in cases where no clear scientific consensus exists on the issue at hand, or on the measures needed to address it.

A decisive shift in the framing of the Baia Mare accident can be detected in some of the official declarations emanating from the Hungarian governmental

representatives from March 2000 onwards. The Hungarian Minister of Foreign Affairs, János Martónyi, insisted on the fact that the Baia Mare case

*is an environmental problem and not about tension in political or security policy. We continue to maintain our position that no political tension should be brought into these questions. Each side should try, as far as possible, to exclude political tensions from this matter.*⁹⁸

Hungary's pledge of support to Romania's EU and NATO accession is also illustrative of the efforts to defuse the tension.⁹⁹ Paradoxically, Foreign Affairs spokesman, Gábor Horvath, stated in March 2000 that he

*would be amazed if Romania would be allowed even in the vicinity of the EU's negotiation table (...) this is the sixth¹⁰⁰ similar environmental incident in Romania in recent years that has caused very serious damage to Hungary.*¹⁰¹

This apparent contradiction within the different branches of the Hungarian government points to its relative disorganisation, or lack of discipline, but most importantly to the absence of a common position within the government on the attitude to adopt following the Baia Mare spill.

The constitution of a special commission to deal with the accident was also meant as a means of coordinating the Hungarian government's responses¹⁰² and of assuaging the tension between both countries, much of which had originated in the bad crisis-management of Pál Pepó, Hungary's Environment Minister.¹⁰³ This move seemed to be confirmed by the declarations of János Gönczy, the Secretary of state in charge of the commission, who stated in March 2000, contrary to Viktor Orbán's earlier legal threats, that "The Hungarian and Romanian governments should use diplomatic tools to settle their demands for compensation following the cyanide spill".¹⁰⁴

The defusion of the political tension could be operated, in practise, through the delegation of the management of the crisis to scientific experts, through an increased

⁹⁸ *BBC Monitoring*, "Minister - Pollution dispute not political tension with Romania", 15 March 2000.

⁹⁹ *Interfax*, "Central European Initiative Summit calls for EU enlargement", 27 June 2000.

¹⁰⁰ Note that the estimations of the number of accidents differ because some tailings dam release sludge periodically.

¹⁰¹ Declaration made on Voice of America. See T. Kiss, "Hungarian-Romanian relations poisoned", *BudapestSunOnline*, 16 March 2000.

¹⁰² Interview with Péter Kovács, Budapest, 24 June 2008.

¹⁰³ For a criticism of Pál Pepó's administration's management of the issue, see REC, no date, *op. cit.*

¹⁰⁴ *BBC Monitoring Service*, "Commissioner calls for talks, not lawsuits with Romania", 11 March 2000.

reliance on technical and scientific expertise to address the issue. The declaration of the Hungarian Justice Minister Ibolya David is significant in this respect, positing that “the environment pollution affecting Hungary was not a political but a professional affair that should be handled in a professional manner”.¹⁰⁵ By transferring the responsibility for the management of the Baia Mare accident to less politicised constituencies, the nationalist discourses lost some of their momentum and deflated. It is interesting, in this regard, to note the distinction made by Ms. Ibolya David between a “political” and a “professional” management of the issue, which relates to the derogatory connotation associated with the term “politics” in Central Europe. As Alexandra Ionescu pointed out to us, “political management” is not only associated with partisanship but also with corruption, and never with a fair policy-making procedure.¹⁰⁶ The distrust towards “politics” and politicians on this affair was obvious in the commentaries of our interviewees too. This shifting of the frame to a less politicised, environmental/technical one was thus also a way of defusing the fears and distrust within the populations.

The International Baia Mare Task Force,¹⁰⁷ which had been organised by the European Commission and the Assessment mission conducted by the United Nations Environment Programme, contributed to a great extent to defuse the political tension. This was confirmed by Philip Weller who had taken part in the Task Force, and by Fritz Balkau, a mining expert who used to work for the UNEP office in Paris.¹⁰⁸ For Philip Weller, reaching scientific consensus was all the more important in the Baia Mare case to avoid another long-lasting “environmental battle” such as the one which had opposed Hungary and Slovakia for years over a joint hydropower Danube project.¹⁰⁹

Both experts stressed that the professional expertise of Tom Garvey – former deputy director European Commission DG Environment¹¹⁰ who headed the Baia Mare Task Force (2000-2001) –, and Frits Schlingemann – the European Regional Director

¹⁰⁵ *BBC Monitoring*, “Visiting Romanian minister regrets recent pollution incidents”, 15 March 2000.

¹⁰⁶ See A. Ionescu, “Du parti-Etat à l’Etat des partis. Nature et fonctions des partis politiques post-communistes en Roumanie”, Thèse de sciences politiques, IEP Paris, 2007.

¹⁰⁷ It included representatives from the Hungarian and Romanian governments, the United Nation’s Economic Commission for Europe-UNECE, the International Convention for the Protection of the Danube River-ICPDR, and an expert from the environmental community (WWF, head of the Danube Carpathian Programme). The Task Force’s assignments were to assess the damages of the spill, investigate the causes of the accident and outline measures to prevent other accidents.

¹⁰⁸ Interview with Fritz Balkau, Paris, 4 July 2008.

¹⁰⁹ “Death of a river”, April 2000, *op. cit.*

¹¹⁰ Member of the board of director of the Regional Environment Center, he had been involved in the discussion on Aarhus convention and in the accession process of the Central and Eastern European countries.

for UNEP who conducted the assessment mission – had been central to calm things down, and even more so their efforts to consult with all the parties involved. Technical investigation and scientific findings, and most of all wide ranging consultations, were used as a moral support to “allay the fears of the public” about the continuing nature of the hazards. The objective was to undercut the “variable estimates of the degree of biological damage and recovery” that were fuelling illegitimate accusations. The composition of both missions was also decisive in their effectiveness. Indeed, both missions were composed of experts and officials from various occupational backgrounds, and with diversified and complementary expertise and working methods. In the Baia Mare Task Force, six high level officials from national, regional (EU) and international environment protection bodies were recruited. In the case of the UNEP/OCHA mission, sixteen experts from seven different countries and various backgrounds (chemistry, ecotoxicology, biology, process and dam engineering) were enrolled to conduct field work, as well as representatives of the WHO, the UN Economic Mission for Europe and the Hungarian and Romanian European Commission delegations.

These interventions do appear to have appeased the tension. The fact that the International Baia Mare Task Force represented a large range of stakeholders probably played an important part in the wide acceptance of its results. The reports produced have been used ever since as reference points: for Hungary to sue the Aurul company,¹¹¹ and for all the actors interviewed during our empirical study.¹¹²

If the reports have been reference points ever since, they did not suffice to put an end to the rumours that had spread in the wake of the accidents. One could still hear from the mouths of high representatives in Bucharest, as side anecdotes, that Hungary had polluted its own fish when trying to dilute the pollution,¹¹³ or, in Budapest, that it was no wonder that Romania did not report any fish kill in its rivers because Romania’s over-polluted rivers did not host any. Nevertheless, the international interventions put an end to the escalation of tension and also pointed at directions for post-accident governance, as we will see in the second chapter of this study.

The shift was made possible by a number of factors, a prominent one being the very technical nature and complexity of the problems raised by industrial hazards, which require specific technical knowledge. Róbert Fidusz, the coordinator of Friends

¹¹¹ T. Kaposi, “EU cyanide report an ace for court case”, *Reuters News*, 16 December 2000.

¹¹² All the actors we interviewed referred to it.

¹¹³ Statement heard from the mouth of a Romanian state water company official. It was denied by the Hungarian authorities, which had refused to dump anything in the Tisza as long as no solution had been scientifically proven to be adequate. Interview with Péter Kovács, Budapest, 24 June 2008.

of the earth-Hungary/CEE Bankwatch¹¹⁴ pointed this out to us.¹¹⁵ His organisation had been very vocal about the Baia Mare accident because the coordinator, József Feiler, had known about the danger of mining pollution since his experience participating in a campaign to protest against the potential dangers of the Kumtor gold mine in Kyrgyzstan for health and the environment.¹¹⁶ He had the expertise to understand the cyanide technology, the weaknesses of tailings ponds and the acid drainage process. Furthermore, the type of the accident itself was, from a scientific point of view, consensual, which means that a scientific consensus on the actions to be taken was relatively easy to establish, and facilitated the transfer of management responsibilities to the scientific community. Unlike the spill that occurred in Spain at Aznacollar, there was not much to be done at Baia Mare to limit the impacts of the plume. No emergency large scale soil clean-up was needed, and the controversy did not migrate to questions of adequate actions, or damage assessment methodology.¹¹⁷ Only clean-up activities to remove the dead fish and animals could be undertaken. This point is also noteworthy because scientific controversies are commonplace in times of technological failures, and can hinder the management process of pollution crises quite significantly, as we will see later on, through the study of the dispute over the Rosia Montana gold mine project.

Beyond technical knowledge, the access to information and the collection of relevant data are hard and arduous tasks that few actors, save scientific experts or NGO members, have the capacity or the will to undertake. In the Baia Mare case, according to the Regional Environmental Center, NGOs played a major role in the collection of information.¹¹⁸

The technical and scientific complexity of the Baia Mare case thus explains why it could and was handed over to “professionals”, why the governments requested the assistance of the European Union and other UN agencies and also why international independent teams were appointed to investigate the causes of the accident and give a clear assessment of the transboundary industrial hazards that the mining accidents had highlighted.

The shift in the framing of the Baia Mare accident can suggest two ideas: First, that conflict over natural resources, and particularly water resources, do not lead

¹¹⁴ CEE Bankwatch Network, a watchdog non-governmental organisation that monitors the activities of international financial institutions in Eastern Europe.

¹¹⁵ Interview with Róbert Fidusz, Budapest, 24 June 2008.

¹¹⁶ See the website of this campaign conducted by the CEE Bankwatch <www.bankwatch.org/project.shtml?s=153978>, accessed 27 September 2008

¹¹⁷ S. Jasanoff, 2002, *op. cit.*, p. 266.

¹¹⁸ REC, no date, *op. cit.*

inherently and systematically to conflict. In the case of the Baia Mare accident, discourses were steered away from their original nationalistic terms, through a reframing of the accident in environmental/technical terms, as a means of defusing the tension arising from such discourses. Second, and as a corollary of the first idea, the framing process is a political one, nested in a particular context, and which therefore has an influence on how the issue at hand is managed.

Thus, for example, the polemic that broke out in Hungary between the most affected economic sectors (tourism,¹¹⁹ local commercial fishing industry¹²⁰), the national authorities and some environmental NGOs gives an interesting view of the conflict of interest at play and the different framing potentialities. The fishermen who had lost their source of revenue because of the accident were complaining that too much money was being spent on the assessment of the environmental damages, and not enough on assessing the damages of the accident on the fishing sector.

On this problem, one local fisherman declared:

*We don't need hundreds of experts to prove again and again that the Tisza fish were poisoned; it speaks for itself. There is nobody here really to represent us and we fishermen are only notified about political and environmental rallies after they have happened. The Greens were nowhere in sight when I was collecting poisoned fish carcasses.*¹²¹

At the local level, it appears that the local fishermen were urging for a speedy ending of the fishing ban,¹²² while the environmental community stressed the need to allow the ecosystem to recover in a sufficient length of time.¹²³

Beyond the underlying competition between different interest groups, the fisherman polemic points to the indirect impacts of industrial pollution that affect a polluted site. In this context, Péter Kovács, from the Ministry of Environment and Water, pointed out that more damages were done to the Tisza tourism activities by the

¹¹⁹ See B. Fincziczki, "Deep trouble", *Budapest Business Journal*, April 2000.

¹²⁰ M. Prommer, K. Skwarek, "Report on the economic and social impacts of the cyanide spill and heavy metal pollution in the river Tisza region", Center for Environmental Study, Budapest, May 2001, <www.ktk-ces.hu/4153a.html>, accessed 26 July 2008. It was sponsored by the WWF, and evaluated the social and economic damages to US\$11,4 to 15 million (including the cost of the ecosystem's rehabilitation). The study underlines the "shocking" impact for local businesses because of the "vanishing of regular customers in the region, the loss of properties values and related loss of foreign investment."

¹²¹ T. Kiss, "Fishermen's blues", *Budapest sun Online*, Vol. 3, n° 1; 9 March 2000.

¹²² The Hungarian authorities lifted the total ban on resettling fish into the devastated Tisza and its tributaries among which the Szamos/Somes in May 2000.

¹²³ D. Langenkamp, "Signs of life on Tisza and Danube", *Christian Science Monitor*, 8 March 2000.

vehement recrimination and dramatic description of the situation than the actual accident itself.¹²⁴ The same situation developed in Spain following the spill, as the agricultural sector of the region found itself in need of fighting back and deconstructing a bad reputation. This was not so much acknowledged in the Baia Mare case. The fact that the government sued the Aurul/Transgold company for compensation shows that the assessment of the degree of damages caused by the spill remains a controversial issue.

While the complexity of the issues does explain the need for specialised expertise, the technical/scientific approach of the Baia Mare accident resulted in the discarding, as secondary matters, of contentious social and economic issues that were raised by the accident. Emphasis was put on the technical and scientific aspects of the accident; the question of the evaluation of the damages was handed over to independent investigative missions, while that of compensation for the damaged was transferred to legal experts. It resulted in the sealing off of the Baia Mare case from wider public scrutiny. Jávör Benedek from the environmental Hungarian NGO Védegyelet implicitly confirmed this when he said that since Baia Mare had been a “legal” case,¹²⁵ his organisation could not do much.¹²⁶

The limitations of the “environmental” framing can also be observed in the controversy arising around the opening of a gold mine on the Rosia Montana site.¹²⁷ Just as the Baia Mare site, the Rosia Montana site is located on the Romanian catchment area of the Tisza river (via the Maros catchment). The Hungarian authorities, because of the Baia Mare precedent, and on account of the potential dangers of the cyanide technology which was planned for use on the Rosia Montanan site, claimed their right to be involved in the decision to open a new gold mine, along with a number of NGOs.¹²⁸ Interestingly considering our previous remarks on the EU

¹²⁴ Interview with Péter Kovács, Budapest, 24 June 2008. In March 2000, Tourinform offices, operated by state-owned Hungarian Tourism Rt, started a nationwide marketing campaign at the end of March, entitled “The Tisza is Alive”. See B. Fincziczki, “Deep trouble”, *Budapest Business Journal*, 24 April 2000.

¹²⁵ On 11 July 2000, Hungary announced a claim of 29.37 billion forints, US\$181.7 million, against an Australian mining company for this January cyanide spill that devastated its rivers. See “Pollution-rivers Danube, Tisza and Somes, Hungary and Romania”, *Lloyd’s information Casualty Report*, 12 July 2000.

¹²⁶ Interview with Jávör Benedék, Budapest, 27 June 2008.

¹²⁷ See the website of the local community based NGOs Alburnus “Save Rosia Montana”, <www.rosiamontana.org>. See the Rosia Montana Gold Mine Company website, <www.rmgc.ro/en/rosia_montana.php?page=contact>, a joint venture between the Romanian state mining company Minvest S.A. and Gabriel Resources Ltd, a Canadian based junior mining company.

¹²⁸ Interview with Róbert Fidusz, Jávör Benedék, Csaba Mezei, Budapest, 24, 26 and 27 July 2008; interview with Stephanie Roth (phone interview), 23 July 2008. See statement of 21 Hungarian NGOs opposing the project, *Rompres*, “SC Rosia Montana GoldCorporation does not submit exploitation project to environmental authorities”, 7 August 2000.

accession incentive, Hungarian Prime Minister Ferenc Gyurcsany officially asked Romania, in December 2004, not to open the controversial Rosia Montana gold mine, in return of which Hungary would promise not to veto Romania's accession to the EU over the Baia Mare crisis.¹²⁹ Knowing the project is planned in a region located more than 500 km away from the Hungarian border, however, it seems that the environmental argument may not be the most convincing one available for use by Hungary.¹³⁰ Besides, a number of other arguments raised by groups opposed to the project, relative to legal dispositions, historical and patrimonial concerns,¹³¹ resettlements issues,¹³² have been put forward. For example, the Romanian branch of the Soros Foundation is an active opponent to the construction of the Rosia Montana gold mine, on the basis that such a project violates the rule of law and the rights of the people.¹³³

Experts estimate that Hungary does not have a strong case to put up against the construction of the Rosia Montana gold mine on the basis of the transboundary environmental pollution risk, because impacts have been shown to be minimal in case of an accident.¹³⁴ Instead of using this environmental framing, the country would be better off acknowledging its historical bonds with the region and the people,¹³⁵ its concerns for the potential destructive impact of the project on the landscape and the community life.

Based on these observations, we can see that neither the "security" framing nor the "environmental/technical" framing should be taken as givens, or as endogenous to the nature of industrial accidents causing transboundary water pollution. These framings ought also to be questioned, and studied, because they can influence the choice that actors make to get involved or not. These framings can promote a "neutral" approach, based on the "objectivity" of scientific expertise or, as is the case in the ENVSEC – Environment & Security Initiative (see below for full description) –, "promote the use of environmental management as a strategy for

¹²⁹ *Reuters News*, "Hungary Prime Minister asks Romania not to open gold mine", 20 December 2004.

¹³⁰ We are grateful to Stephen Stec for pointing out this issue.

¹³¹ See Eddie O'Hara, general rapporteur on the Cultural Heritage, "Information report on Rosia Montana", Council of Europe, Parliamentary Assembly, Committee on Culture, Sciences and Education, 21 December 2004. Note the mobilization of the professional association ICOMOS-International Council on Monument and Sites against the project.

¹³² See M. Cernea, "The Truth about the Resettlement of the Apuseni Mountains", *Formula As*, n° 582, September 2003.

¹³³ Interview with Renate Weber, Brussels, 2 June 2008; interview with Andreea Chifan, Bucharest, 23 June 2008.

¹³⁴ This point is still controversial.

¹³⁵ We are grateful to Stephen Stec from the REC for raising our attention on this matter.

enhancing cooperation and reducing insecurity”. We can see from our empirical case study that both these strategic approaches can and have contributed to better governance of the issue at hand, in part because of their role as promoters of alternative and innovative strategies. These ideas will be kept in mind as we examine the different governance schemes set up in the wake of the Baia Mare accident.

In summary, we can say that the Baia Mare accident does not qualify as a “security” issue simply because of its transboundary impacts or because it involves countries with a long history of enmity. National security considerations were raised, and tension did build up between the two main protagonists, but a detailed analysis shows that such an escalation derives more from a political instrumentalisation than from an objective threat deriving from the accident itself. This observation highlighted in turn the importance of analysing the frame chosen to present an issue, as such a choice is very revealing of the social context the issue at hand is embedded in. The emphasis that was put on the “environmental” dimension of the Baia Mare accident, for instance, and thus on the need for “professional” expertise, was a result of the political tensions that emerged in the wake of the spill, and the will of both Romanian and Hungarian authorities to defuse it. Actors seem therefore to have the power to impose a neutral, depoliticised framing of an issue at hand, and thus prevent action from aligning on overrated political conflicts.

MANAGING THE CRISIS: GOVERNANCE INITIATIVES AND THEIR IMPACTS

In this second part, we will be looking at the governance schemes that emerged after the Baia Mare accident, and point out the implications of an “environmental/technical” frame on the management of the case. It appears that the “downgrading” of the Baia Mare accident in security terms offered greater opportunities for a larger range of actors to get involved. The initiatives taken by international and regional organisations, NGOs and experts show how the spill and its particular framing opened up space for a political momentum to develop and act as a driving force for initiatives. The different governance schemes that were proposed also illustrate the positive influence that non-state actors can have on the policy-making process of states. We also drew from our empirical observations that innovative initiatives are fostered when actors step in or are taken out of their mission statement and predetermined field of action. This was made particularly clear in the case of non-state actors. Because of their non-state nature, these actors cannot intervene and act as they please but must yield to the constraints of a governmental structure and follow their statement mission. It is interesting to note that it is precisely these limitations, which forced non-state actors to look outside their traditional modes of action that can foster alternative strategies and unexpected outcomes, enabling the diffusion of authority for decision-making among multiple actors.¹³⁶ In the Baia Mare case, the role of independent experts was central in stimulating innovative initiatives, such as the commissioning of an independent investigation on the causes of the accident. Business actors were also targeted: knowing that governance changes at the state-level “only goes so far”, specialists of the region promoted the by-passing of national legal regimes.

¹³⁶ S. Jasanoff, 2002, *op. cit.*, p. 267.

PROLIFERATION OF ACTIVITIES IN THE WAKE OF THE ACCIDENT

As already mentioned, the Baia Mare accident and the following accidental spills brought the whole of the Tisza region, and mainly Hungary and Romania, under close scrutiny. Most of this attention was driven by the fact that many of the countries affected by the accident were candidates for EU accession: Hungary and Slovakia joined in May 2004, Romania in January 2007. EU accession negotiations were underway and the stakes for every party to keep the process going were high. The governments did turn to Brussels for help but many other governance levels were activated.¹³⁷ Actions took place at the international level with the interventions of the UN agencies (UN Environmental Programme, UN Development Programme), at the regional level through the actions of the UN Economic Commission for Europe, the International Convention for the Protection of the Danube River and the development of regional cooperation around the Tisza river, and also on the transnational level with the involvement of international NGOs like the World Wide Fund, Friends of the Earth, or Greenpeace.

What is remarkable in the Baia Mare case is the diversity of the governance initiatives elaborated. Many different instruments were proposed by a wide range of actors in order to tackle many of the problems that had been highlighted by the accident; in the sector of mining operations, environmental liability, corporate governance, transboundary water management, industrial water pollution. The initiatives adopted different approaches and different tools, borrowed from the legal, the institutional, technical/scientific or the diplomatic fields. This is why we can speak of a local momentum for global governance: the Baia Mare acted as a driving force and a political momentum to reach consensus and gather support for the modernisation of environmental policies and capacities.¹³⁸

EXAMPLES OF GOVERNANCE SCHEMES

Our aim is to understand the politics and the institutional governance options that emerged from one particular and local phenomenon, in order to draw

¹³⁷ *European Report*, "EU/Danube-Agenda set for international Danube Task Force", 15 March 2000.

¹³⁸ REC, "REC urges strong actions to prevent repeat of Tisza river cyanide disaster", press release, 7 March 2000.

recommendations for the management of similar events. We will first present a selection of the governance options that emerged after the Baia Mare spill, show how they came about, what tools were devised and/or used, to finally examine in detail their main characteristics and limitations.

Tisza Group/ICPDR- International Convention for the Protection of the Danube River- Inter-state regional cooperation

A closer cooperation between Tisza countries developed following the spill. After the accident, official representatives from Romania, Hungary, Ukraine and the Slovak Republic¹³⁹ met in Cluj-Napoca in Romania on the 23rd and 24th of May 2000. The representatives of the four governments decided to set up a Tetralateral commission to prepare national inventories of potential accident risk spots in the Tisza catchment area. The “Inventory of 42 Potential High Accident Risk Spots” was published in July 2000¹⁴⁰ with the help of Zinke Environment Consulting and an update based on data gathered in 2005 is now under development. In December 2004, the cooperation was formalised by a Memorandum of Understanding signed by Ukraine, Romania, the Slovak Republic, Hungary and Serbia under the auspices of the Sofia Convention for the protection of the Danube river. The ICPDR then established the sub-basin Tisza group,¹⁴¹ whose objectives are to tackle the specific problems “related to water supply, severe flooding, droughts, landslides and erosion, accidental pollution by industrial and mining activities as well as pollution from agricultural sources”. Chaired by a representative of the European Commission, the Tisza group published the “Analysis of the Tisza River Basin 2007”,¹⁴² meant as an initial step towards the Tisza river basin management plan.¹⁴³ It was introduced as a “European model for ministerial action” during the sixth “Environment for Europe Conference” that took place in Belgrade in October 2007.¹⁴⁴

¹³⁹ In 2000, the Republic of Yugoslavia was dealing with the Kosovo conflict.

¹⁴⁰ <www.zinke.at/Zinke_data/Images/Tisa%20ARS.pdf>, accessed 4 June 2008.

¹⁴¹ See <www.icpdr.org/icpdr-pages/tisza_group.htm>, accessed 4 June 2008.

¹⁴² Note that the ICPDR coordinated and edited the documents; its expert groups provided guidance, while the European Commission contributed with technical and financial support. See ICPDR, “Analysis of the Tisza River Basin. Initial step toward the Tisza River Basin Management”, 2008.

¹⁴³ Interview with Diana Heilmann, Vienna, 18 June 2008.

¹⁴⁴ *United Nations Information Service*, “Tisza River Basin a European Model for Ministerial action”, 11 October 2007, UNIS/INF/244.

UNECE – civil liability – multi-stakeholder process

Another noteworthy example is the multi-stakeholder process, which led to the “Liability protocol on the civil liability for damage caused by the transboundary effects of industrial accidents on transboundary waters”.¹⁴⁵ Initiated by the Hungarian government in the wake of the accident and strongly supported by Switzerland and Belgium, it became a joint work topic for governments within the UN Economic Commission for Europe-UNECE, which houses the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Helsinki, 1992) and the Convention on the Transboundary effects of industrial accidents, to which it is legally bound. It was signed by twenty-two countries during the Ministerial Conference “Environment for Europe” in Kiev, Ukraine on May 2003,¹⁴⁶ and intended to fill the gaps in international environmental legislation and to solve the problem of uncompensated damage in neighbouring countries.¹⁴⁷

WWF - Mining Waste directive – European lobbying and local micro projects in Romania

The World Wild Fund was one of the most active NGOs in the Baia Mare case. Its Austrian office had been working on the Danube river since 1992 and the whole organisation had been very involved in the toxic spill that affected the Dořana park in 1998. One of its representatives was invited to participate in the International Task Force set up by the European Commission to assess the damages. The new pollution case demonstrated the need for a better European legislative framework in order to protect the environment and the people from the pollution caused by mining activities. The WWF’s Brussels based office organised a campaign of awareness on toxic waste storage¹⁴⁸ and played an active role in the discussions that preceded the vote of the Directive for Mining Waste at the European level.¹⁴⁹ The WWF made recommendations to the European Commission, calling for EU environmental law to be revised, clarified and strengthened to prevent spills and leaks of toxic waste from

¹⁴⁵ Governments, the private sector – including industry and insurance – and intergovernmental and non-governmental organisations were involved in the process.

¹⁴⁶ <www.unece.org/env/civil-liability/welcome.html>, accessed 6 June 2008.

¹⁴⁷ See F. Bernardini, Statement delivered at the Workshop on transboundary accidental water pollution, liability and compensation: challenges and opportunities”, Budapest, Hungary, 21-22 May 2007.

¹⁴⁸ See V.M. Sol, S.W.M. Peters, H. Aiking, “Toxic waste storages sites in EU countries. A preliminary inventory”, *IVM Report*, n° R-99/D4, February 1999, Institute for Environmental Studies, Amsterdam University.

¹⁴⁹ Interview with Sergiy Moroz, Brussels, 2 June 2008.

metal mines. It also set up a new WWF Programme “One Europe More Nature” based in the city of Baia Mare. Focusing on “damaging activities”, it seeks “to identify, create and communicate working examples of economic mechanisms for nature conservation and restoration and rural development across Europe”.¹⁵⁰

European Commission – Task force and EU environmental regulation

The Baia Mare accident provided a political momentum for the European Commission. The Environment Commissioner Margot Wallström declared that

*the Baia Mare accident (...) has demonstrated that we need to further tighten European legislation. We must ensure that polluters can effectively be held responsible for damages. We will also need to strengthen our civil protection capabilities.*¹⁵¹

This resulted in a review of the EU environmental legislation and the setting of broad policy lines for tackling the issues of non-energy extractive industry for the EU.¹⁵² The Baia Mare accident was compared with the explosion of the AZF fertiliser factory that occurred in France on September 21, 2001 and also with an accident that occurred in a fireworks factory of Enschede in the Netherlands in May 13, 2000.¹⁵³ The Commission decided to amend the SEVESO directive concerning the prevention of industrial accident,¹⁵⁴ proposed a new Directive on the management of waste from extractive industries which was voted in 2004 (Directive 2004/35/EC) and later

¹⁵⁰ M. Seibert, “WWF Interview: New approaches to preserving an old landscape”, 8 November 2007, <www.panda.org>, accessed 6 July 2008. See the programme website:

<www.panda.org/about_wwf/where_we_work/europe/what_we_do/danube_carpathian/our_work/nature_and_prosperity/one_europe_more_nature_maramures_romania/index.cfm>, accessed 6 July 2008.

¹⁵¹ *The Bulletin*, “EU disaster law”, Vol. 9, n° 2, April 2000, pp. 20-21.

¹⁵² See European Commission, “Promoting sustainable development in the EU non-energy extractive industry” [Communication from the Commission] COM(2000) 265 final, Brussels, 3 May 2000. See *Enterprise Europe*, “How can mining and quarrying in the EU be made safer, cleaner, and yet more competitive?”, n° 1, September 2000, pp. 18-19.

¹⁵³ “The accidents have also raised the question of the effectiveness of Community policies intended to prevent such disasters and have highlighted the need for a review of environmental policy in this area”. See European Commission, “Safe operation of mining activities: a follow-up to recent mining accidents”, [Communication from the Commission] COM(2000) 664 final, Brussels, 23 November 2000.

¹⁵⁴ See the European Commission’s website dedicated to Chemical Accidents: Prevention, Preparedness, and Response (Seveso II), <<http://ec.europa.eu/environment/seveso/index.htm>>, accessed 28 July 2008.

amended (2006/21/EC), and a directive on Environmental liability (2004/35/EC) based on the “polluter pays” principle.¹⁵⁵

United Nations Environmental Programme – UNEP environmental management, industry

The Division of Technology, Industry, and Economics of the UNEP in Paris offered an extensive follow-up in the field of environmental management for the industry. Because their information platform (Mineral Resources Forum) had turned out to be very useful to provide assistance and information on mining issues and pollution, one of their first initiatives was to upgrade the website.¹⁵⁶ They used the APELL Programme that had been developed since 1986 to minimise the occurrence and harmful effects of technological accidents and environmental emergencies to produce, in 2001, guidelines in Romanian language.¹⁵⁷ They intended to raise awareness on the importance of preparedness measures for emergencies at the local level for both companies and communities, and help all stakeholders to prepare themselves adequately for emergency responses.¹⁵⁸ They also organised a workshop for mining regulators on “Environmental regulation for accidents prevention in Mining, Tailings and Chemicals management” in Australia in October 2000. They launched a multi-stakeholder process on a voluntary code for the use of cyanide in gold mining.¹⁵⁹ They work jointly with the International Commission on Large Dams (ICOLD) to review the problems related to tailings ponds.

¹⁵⁵ See the European Commission’s website dedicated to Environmental Liability: <<http://ec.europa.eu/environment/liability/index.htm>>, accessed 28 July 2008.

¹⁵⁶ Interview with Fritz Balkau, Paris, 4 July 2008.

¹⁵⁷ See the website dedicated to APELL (Awareness and Preparedness for Emergencies at Local Level), <www.unep.fr/scp/sp/process>, accessed 27 September 2008.

¹⁵⁸ See “APELL for Mining, Guidance for the Mining Industry in Raising Awareness and Preparedness for Emergencies at Local Level”, <www.unep.fr/scp/publications/details.asp?id=WEB/0058/PA>, accessed 27 September 2008.

¹⁵⁹ UNEP, Division of Technology, Industry and Economics, “2000 Activity report” <www.unep.org/shared/docs/annual_reports/ann_report2000_uk.pdf>, accessed 4 July 2008. See UNEP, ICME, “Report. Workshop on industry codes of practices: cyanide management”, 25-26 May 2000, Ecoles des Mines, Paris, France.

Environment and Security Initiative – ENVSEC , Multilateral state-level cooperation

ENVSEC is a framework cooperation initiative, which was launched jointly by the Organisation for Security and Cooperation in Europe–OSCE, the UNEP and the United Nations Development Programme–UNDP. These organisations with mandates on security, development and environmental matters intended to join forces in order to “identify and mobilise cooperation around shared environmental concerns as a means of strengthening good governance and reducing tensions between and within countries”. The first meeting took place in Belgrade in 2002, but ENVSEC was officially established in Kiev 2003 at a ministerial Conference. The United Nations Economic Commission for Europe–UNECE and the Regional Environmental Center – REC¹⁶⁰ joined in 2005. Later the NATO Sciences for Peace and Security committee joined in as an associated partner.

Its founding idea is that “environmental issues negatively affect relations between states” and that, like in the Baia Mare accident, “local environmental stresses can trigger conflict because of their broader, even transboundary impact”. The initiative is structured in three pillars: first, assessment and monitoring of vulnerability; second, capacity building and institutional development; third, promotion of policy development and implementation. ENVSEC regions for action are Central Asia, South and Eastern Europe¹⁶¹ and Southern Caucasus. The Tisza river basin was also included in a desk assessment on mining that had been identified as a priority sector¹⁶² because of the Baia Mare accident. A sub-regional Conference was organised on 11-13 May 2005 in Cluj-Napoca in Romania on “Reducing environment and security risks from mining in South Eastern Europe and the Tisza River Basin”. Participants endorsed the report produced by Philip Peck “Mining for Closure”, as a

¹⁶⁰ The REC is a non-partisan, non-advocacy, not-for-profit international organisation with a mission to assist in solving environmental problems in Central and Eastern Europe (CEE). It was established in 1990 by the United States, the European Commission and Hungary. The centre fulfils this mission by promoting cooperation among NGOs, governments, businesses and other environmental stakeholders, and by supporting the free exchange of information and public participation in environmental decision making. Today, the REC is legally based on a charter signed by the governments of 29 countries and the European Commission, and on an international agreement with the government of Hungary. The REC has its head office in Szentendre, Hungary, and country offices and field offices in 17 beneficiary countries.

¹⁶¹ Belarus, Moldova, Ukraine, Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Former Yugoslav Republic of Macedonia, Serbia, Montenegro and Kosovo.

¹⁶² Managing and reducing the transboundary risks of hazardous activities has been recognized as one of the priority ENVSEC fields of action from the onset of the Initiative in South Eastern Europe.

guide and checklist for reducing and mitigating the environmental, health and security risks from mining practices”.¹⁶³

IMPACT OF THE PROLIFERATION

In line with Ken Conca, we consider the “plethora of institutional forms”,¹⁶⁴ the proliferation of initiatives, to be part of the solution, not a problem in itself. This is based on the fact that environmental issues are complex, cross-sectoral, and encompass many dimensions: political, social, economic, but also technical and scientific. In this sense, they do not only cross state borders but also require “more pluralistic understandings of authority, more flexible conceptions of territorial sovereignty, and more heterogeneous ways of knowing about problems and solutions”.¹⁶⁵ It follows that these matters can potentially be tackled in bilateral, multilateral, or regional settings. They can also be approached from a legal, a social, a diplomatic, an/or a technical perspective, and this by a wide range of actors.

A UNEP mission that conducted a Rapid Assessment Mission four years after the accident concluded that “few improvements in the environmental situation of the region [had been made], despite the impressive number of initiatives concerning the Tisza River Basin”. The author pointed at the probable “lack of real political commitment and coordination between these initiatives, leading to duplication of efforts, as well as to poor or non-existent enforcement of measures”.¹⁶⁶ She also underlined that the institutional capacity existed on the ground, but that states simply failed to follow suit and to implement recommended policies.

Contrary to this view, we consider that the different initiatives undertaken shed light on the opportunities opened up by the interplay of actors and the combination of governance levels. Naturally, there are some limitations to this position, related to structural flaws and agent weaknesses. States can appear at times to be reluctant to implement policy recommendations originating from regional cooperative frameworks, just as national agencies often prove to be too weak to ensure monitoring missions. The scope of action of international and regional institutions is, most of the time,

¹⁶³ Declaration of the High-Level Panel of the Sub-regional Conference on “Reducing Environment and Security Risks from Mining in South Eastern Europe and the Tisza River Basin”, Cluj-Napoca, 13 May 2005, <www.envsec.org/see/docs/Cluj%20Declaration.doc>, accessed 6 June 2008.

¹⁶⁴ K. Conca, 2006, *op. cit.*, p. 8.

¹⁶⁵ K. Conca, 2006, *op. cit.*, p. 7.

¹⁶⁶ K. Burnod-Requian, 2004, *op. cit.*

limited to the promotion of dialogue, while some NGOs will only intervene when the media coverage is wide enough. This list is by no means exhaustive, and we will come back to it later on this chapter as we examine some of the Baia Mare governance mishaps. But we want to first demonstrate that our study is not so much based on idealistic perception of world politics, but by a strategy-oriented conviction that progress can be achieved.

We argue that these limitations, inherent in complex social systems and more specifically in the turbulent world of international politics, shed a light on the ways and means that can be developed to influence policy processes. The strategy we pointed out in the first chapter of this study, whereby the management of the accident was left for experts to handle, appears to have directed attention away from the high-politics forum, allowing the development of bilateral negotiations. We want to make the point that actors will coordinate their initiatives partly because problems raised by industrial accidents and transboundary accidents are complex. Such issues require knowledge in legal, political, technological and scientific fields, and few are the experts that are able to master their every aspects. In such a situation, it is our belief that the interplay of actors can only increase the chances of making progress.

We will therefore examine the underlying rationale of these governance initiatives to get a better understanding of their benefits and their limits. The difference between initiatives that tackled the accident directly, and initiatives that took advantage of the political emergence that emerged as a consequence of it, is important to bear in mind. The sets of objectives are very different and one should be aware of it so as not to misjudge the results. This confusion can help explain the disappointment expressed by some activists, like Róbert Fidusz, for whom “nothing happened on the Tisza river since the accident”.¹⁶⁷ In fact, he did not consider as an advancement the Tisza sub-basin initiative conducted under the auspices of the ICPDR, nor the WWF-Hungary activities on the Tisza flood plains.

In the same logic, obstacles that stand in the way of governance initiatives should be viewed in a long, rather than a short time frame, which stimulates a much more pessimistic assessment of the achievement of such initiatives. Such obstacles can be overcome in time, as underlined by Mária Galambos from the Hungarian Ministry of Environment and Water as she speaks of the Liability Protocol. This initiative is considered to be a failure because, out of the 22 countries who signed it, only Hungary ratified it.¹⁶⁸ However, a workshop on “Transboundary accidental water

¹⁶⁷ Interview with Róbert Fidusz, Budapest, 24 June 2008.

¹⁶⁸ Interview with Hannes Descamps (phone interview); 9 July 2008, Alexios Antypas, Budapest, 30 June 2008.

pollution, liability, and compensation: challenges and opportunities” was organised in May 2007 in Budapest, based on the idea that state representatives had changed, and that many were not aware of the existence of the protocol. Considering that the Protocol will enter into force only once it has been ratified by sixteen states, such initiatives are crucial in helping bring the Protocol into force.¹⁶⁹

GOVERNANCE AT WORK

BAIA MARE: A DRIVING FORCE AND LOCAL MOMENTUM FOR NGOS

Based on the definition of governance as a set of governing acts rather than a set of rules, and in line with the idea that the rationale of actors’ involvement is a revealing factor, we will examine in further detail initiatives originating from the “civil society”.

Logically, the nature of the organisation goes a long way in explaining the form and extent to which it will get involved. As Csaba Mezei, Greenpeace Hungarian office manager underlines, Greenpeace has to appear as a hero, a kind of David fighting Goliath. Consequently, their activities cannot all be made public, as learning about the “backstage of a campaign”¹⁷⁰ could prove to be confusing for the public. Thus, the organisation never sought credit for its negotiation with the Romanian state mining company of the constitution of a portfolio to finance a mining hot spot remediation plan.¹⁷¹ Rather, the organisation prefers to be remembered as the watchdog agency who demonstrated in front of the Aurul company in Baia Mare.¹⁷²

¹⁶⁹ See the status of ratification of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Water, <www.unece.org/env/civil-liability/status_cl.html>, accessed 1 October 2008. Only one country out of the 24 signatory countries had ratified it.

¹⁷⁰ Interview with Csaba Mezei, Budapest, 26 June 2008.

¹⁷¹ Interview with Alexander Zinke, Vienna, 18 June 2008; interview with Anamaria Bogdan, Bucharest, 23 June 2008.

¹⁷² *Associated Press Newswires*, “Greenpeace accuses Australian company of irresponsibility”, 23 March 2000.

In line with their direct action strategy, Baia Mare was a driving force for Greenpeace's activities. The accident was presented as an illustration of the "Eastern European ecological nightmare" depicted as "unsecured, burning landfills, toxic factory sewage and dead rivers, cyanide tanks with unsafe dams and leaky pipelines". The Greenpeace headquarters organised a fact-finding journey quickly after the spill in February 2000 to "witness the impacts in Hungary". Their report concluded that the mining company "Aurul had not only killed life in the Tisza river system, but also left permanent damage in Romania and continues to pose imminent risks."¹⁷³

Considering the importance of the problem, Greenpeace, who had been organising the Central and Eastern Europe initiatives from its Vienna branch,¹⁷⁴ decided to open offices in Budapest and in Hungary.¹⁷⁵ The NGO also decided to launch a campaign focused on the industrial pollution of the watercourses in Southern and Eastern Europe. A bus tour called the Clean Water Tour¹⁷⁶ was set up in 2002 in the objective of raising awareness on the pollution of rivers. Samples were taken and wastewater analysed in order to inform populations in more than twenty locations in Romania, Hungary and Slovakia about water pollution and its dangers. At the same time, Greenpeace promoted the new national offices, advertising their strategies and carrying out direct actions. In March 2000, for instance, two dozen Greenpeace activists chained themselves to the entrance of the Aurul SA gold mine to protest against the spill and the irresponsible behavior of the company in light of the accident.

Greenpeace continued its actions in the mining sector by joining forces with the Romanian local opposition group, Alburnus Maior, to fight a Canadian gold mine project in its campaign "Save Rosia Montana". Its Romanian office took an active role in this campaign, as did the Hungarian office. Csaba Mezei explained that Alburnus Maior could not have been as successful without Greenpeace, and vice versa.¹⁷⁷ Other Hungarian NGOs, like the CEE Bankwatch member for Friends of the Earth and the NGO Védjegylet, also have had a pioneering role in the mining sector.¹⁷⁸ They all very actively collaborated with Alburnus Maior in signing petitions, organising

¹⁷³ A. Bernstorff, J. Kanthak, "The real face of the kangaroo. A fact-finding tour", Greenpeace, The Netherlands, March 2000. Reference to the Australian nationality of the company and the emblem printed on the suit worn by staff members in Aurul Company.

¹⁷⁴ *Rompres*, "Greenpeace expands activity in Romania", 25 June 2001.

¹⁷⁵ Effective in 2002. There was only one office, in charge of the anti-nuclear campaign, in Bratislava before the accident. Interview with Csaba Mezei, Budapest, 26 June 2008; interview with Anamaria Bogdan, Bucharest, 23 June 2008.

¹⁷⁶ <www.greenpeace.hu/tour/index.html>, accessed 5 May 2008.

¹⁷⁷ Interview with Csaba Mezei, Budapest, 26 June 2008.

¹⁷⁸ The Hungarian NGO "Protect the future" was created in March 2000 with the idea of doing politics differently and influencing the policy process, through a pragmatic approach of environmental protection.

demonstrations, participating in the public hearings process, collecting information on mining technologies and transboundary environmental impacts and informing the Hungarian press and authorities.

Interestingly, the WWF played only a secondary role in this related new mining development case. Unlike its environmental conservation work in Romania¹⁷⁹ and its statement on mining in New Guinea¹⁸⁰ would suggest, the WWF adopted a much lower profile on the Rosia Montana gold mine project. Such an attitude can be foreseen in the way the WWF reported the spill; its approach to the accident was, and particularly in comparison with Greenpeace's commitment, rather succinct. For the WWF, the spill highlighted the need to tackle the problems of the Tisza River basin where "frequent floods occur, the most recent in November 1998 and March 2001; landslides in the uplands have become more frequent due to deforestation; and accidental pollution and accidents at tailings dams drastically affect aquatic wildlife and drinking water".¹⁸¹ Besides, it is noteworthy that the WWF's programme, "One Europe More Nature", while based in the city of Baia Mare, does not tackle directly the problem of mining waste.

In a similar vein, the WWF Danube Carpathian programme (DCP), which had been active in the first two years after the spill, gradually stopped dealing with mining issues. And yet, Philip Weller, the coordinator at the time, had participated in the Baia Mare Task Force and organised and partly funded a Summit in Bucharest in April 2001 on "Environment and sustainable development in the Danube-Carpathian region, green light for Europe", chaired by the Duke of Edinburgh, Honorary President of the WWF. Sixteen Central and Eastern European countries had made a pledge in Bucharest to coordinate their operations so as to boost the effectiveness of the anti-pollution programmes in the region. The EBRD, UNDP, and World Bank had attended as well.¹⁸²

One reason for this lower profile is that organisations can be wary of the political risks that can result from an involvement in controversial issues, and Baia

¹⁷⁹ See website for a list of WWF conservation projects in Romania:

<www.panda.org/about_wwf/where_we_work/europe/where/romania/projects/index.cfm?uNC=86412905&uPage=1>, accessed 6 July 2008.

¹⁸⁰ See WWF website:

<www.panda.org/about_wwf/where_we_work/asia_pacific/our_solutions/new_guinea_forests/problems_forest_new_guinea/mining_new_guinea/index.cfm>, accessed 6 July 2008.

¹⁸¹ M. Seibert, "WWF Interview: New approaches to preserving an old landscape", press release, 8 November 2007, <www.panda.org>, accessed 6 July 2008. See the One Europe More Nature's website: <www.panda.org/about_wwf/where_we_work/europe/what_we_do/danube_carpathian/our_work/nature_and_prosperity/one_europe_more_nature_maramures_romania/index.cfm>, accessed 6 July 2008.

¹⁸² Interview with Philip Weller, Vienna, 18 June 2008.

Mare, as we have seen, was a sensitive political issue. In fact, the tension that built between Hungary and Romania cautioned many actors against getting involved in an endless battle. The dispute which has been opposing Hungary and Slovakia for years on similar grounds over the construction of a joint Danubian hydropower project – Gabčíkovo-Nagymaros dams – illustrated the “raging battle” that Baia Mare could potentially become, and this example of a conflict that “not even the International Court of Justice at the Hague has been able to finalize”,¹⁸³ let alone an NGO or an international organisation, persuaded many to adopt a prudent behaviour. This remark holds for the WWF who, after a bad experience in the Gabčíkovo case, seemed wary of any direct involvement in controversial cases.¹⁸⁴ This tendency is further illustrated by the fact that many of the actors who had previously held a strong pro-active attitude in the Baia Mare accident case have now adopted a wait-and-see approach in the controversial Rosia Montana gold mine project case. In many ways, the Rosia Montana project is a fitting illustration of the analysis of Sheila Jasanoff, who posits that

*In development controversies, as in many areas of contested social policy, states and international organisations have grown wary of shouldering blame for decisions that arouse significant resistance or, worse yet, produce visibly disastrous consequences.*¹⁸⁵

We have shown in the first chapter of this study how the political attention dedicated to the Baia Mare accident could be steered away from “security” grounds. This strategy, which Sheila Jasanoff calls “decentralization strategy” because it involves the commissioning of actors other than the state, more closely involved with the issue at hand, appears to have been successful in the Baia Mare case. It enabled the “empower[ment of] non-state actors, promot[ion of] negotiation among divergent stakeholder interests, and capitaliz[ation] on knowledge and practices not accessible to central authorities”.

In the Rosia Montana case, this decentralisation strategy was only partly successful in Hungary. The Hungarian government did adopt a straightforward “environmental/technical” discourse based on international conventions and legal rights.¹⁸⁶ Some Hungarian NGOs acted pro-actively, with the implicit support of the

¹⁸³ *The Bulletin*, “Death of a river”, Vol. 9, n° 2, April 2000, p. 16.

¹⁸⁴ See M. Marmorat, 2006, *op. cit.*

¹⁸⁵ S. Jasanoff, 2002, *op. cit.* p. 267.

¹⁸⁶ See *MTI – EcoNews*, “Hungary uses foreign relations to promote environmental interests”, 29 February 2008. Foreign Affairs minister explains that Hungarian diplomacy has been actively involved in enforcing environmental interests with the support of local councils and civil organisations in the affected countries on the following issues: the pollution of the River Raba; a waste incinerator project in

state, keeping the national authorities informed of any new events occurring on the case. They provided detailed analysis of the technical and legal weaknesses of the Canadian project in Rosia Montana.¹⁸⁷ As a revealing example of their influence, Jávör Benedék from the Védegylet was pleased to note that much of the questions raised by his NGO had been taken into account in the 60 questions sent by the Hungarian Environment Ministry to his counterpart in Romania. However, such an “environmentall/technical” approach was stymied by the fact that the controversy around the construction of the mining site was structured around a pro-development/pro-environment dichotomy,¹⁸⁸ which appears to have hindered the development of adequate and efficient governance mechanisms.

In summary, we can say that the accident did provide a profitable political momentum for civil actors to pursue their own agendas and target new high-risk reward issues. In that sense, the accident created the policy space for wide ranging initiatives, which is noteworthy because actors tend to be wary of high politics issue such as the Baia Mare case. The decentralisation strategy (cf: infra) and environmental framing of the Baia Mare accident (cf: supra) appeared to have encouraged such a wide participation. The analysis of the Rosia Montana case, which we will effectuate subsequently, will help us demonstrate this point. But first we will focus on what strikes us as being a crucial corollary of this decentralisation strategy, namely the beneficial interlocking of the bi- and multilateral levels of governance.

DECENTRALISATION STRATEGY: INTERLOCKING BI- AND MULTILATERAL LEVELS OF GOVERNANCE

So far, we have focused our analysis on multilevel governance initiatives, and in a sense it is true that this type of initiatives dominated the Baia Mare case in numeral terms. However it remains difficult to determine which level of policy turned out to be the more efficient because of the close interlocking of the different levels of action.

Heiligenkreuz both in Austria; a power station project in Trebisov in Slovakia; the illegal transport of German waste to Hungary; the gold mine project in Rosia Montana in Romania; and the pollution of the River Tisza in Ukraine.

¹⁸⁷ Interview with Péter Kovács, Budapest, 24 June 2008, with Jávör Benedék, Budapest, 27 June 2008.

¹⁸⁸ Hungarian European Deputy Gyula Hegyi welcomed a court decision canceling a permit granted to the mining company by saying that it marked the “triumph of environmental interests over capitalist greed”. See *MTI – EcoNews*, “Hungarian MEP welcomes court ruling on Romanian gold mine project”, 25 January 2008.

This interlocking could be formalised through institutions such as the international Task Force set up by the European Commission, or could take a more informal shape. As already mentioned, Greenpeace contacted the Romanian state-owned company REMIN to propose its assistance in dealing with some of their hot spots. The NGO, helped by the Alexander Zinke environmental consultancy, elaborated a portfolio to raise funds. The Austrian Development Cooperation Agency then financed the remediation of the Novat tailings at the Baia Borsa mine site where the spill had originated.¹⁸⁹

Right after the accident on the Hungarian side, Zsuzsana Arokhtati, a senior advisor at the Hungarian Ministry of Environment and Water who took an active role in coordinating the different reactions, explained that every level of governance had been activated.¹⁹⁰ The government circulated information at the EU level, informing EU commissioners Loyola de Palacio, Margot Wallström and Günter Verheugen, who were in charge of Enlargement, contacted the Australian authorities and the director general of the UNEP via their ambassadors in Canberra and in Nairobi, and sent letters to international institutions (UNECE, European Office of UNEP, relevant organisation of the World Health Organisation, the deputy secretary general of OECD, Nicole Fontaine-Chairman of the European Parliament ...) and regional ones (Danube committee in charge of the Danube navigation). Romania also requested the technical and financial assistance of the EU, and participated in the assessment missions.

And yet, in spite of the availability of such forum-shopping possibilities to actors, all our interlocutors in Bucharest and Budapest insisted that bilateral relations had played the most important role in the management of the crisis management, above multilateral interventions. Good bilateral contacts proved to be the determining factor at the operational level,¹⁹¹ and were commended by the Hungarian Environment and Water Ministry as a precious source of reliable information.¹⁹² Bilateral activities also quickly developed at the bureaucratic level, facilitated by preexisting links. Maria Galambos, who had been working on water issues in the Hungarian central administration since the mid-1980s', attested that bilateral and regional relationships had been established all the more easily that some degree of cooperation already

¹⁸⁹ Interview with Alexander Zinke, Vienna, 17 June 2008. See H. Schuster, "Greenpeace hits the road in Central and Eastern Europe", *Danube Watch*, n° 1, 2003. See Alexander Zinke's presentation in ENVSEC, 2005, *op. cit.*

¹⁹⁰ See "Chronology of International Measures and Events Relating to the Pollution of the Szamos and Tisza Rivers by Cyanide and Heavy Metals (February – May 2000)", unpublished document.

¹⁹¹ For instance on 8 February 2000, the Water Quality Protection Sub-Committee of the Hungarian-Romanian Joint Committee for Water Management organised an extraordinary meeting to record all the particular details of the situation.

¹⁹² Interview with Péter Kovács, Budapest, 24 June 2008.

existed. This was confirmed by Romanian Prime Minister Mugur Isarescu, when he declared that "One good thing has come out of all the upsets over the past few months. Romanian and Hungarian authorities have communicated very well and are working to solve (pollution) problems."¹⁹³

These bilateral cooperation activities got less attention than they deserved partly because of the environmental/technical approach used to defuse the political tension. Attention was directed away from states, which called on to international institutions to assess the causes and the scope of the problems, which in turn enabled the development of bilateral relationships. In fact, Zsuzsana Arokhati told us that both governments had set up their own bilateral investigation mission parallel to these international missions because of the delay required for the Task Force to publish results. Decisions could not have waited until December, when the final report was made public. The senior civil servant stressed that by that time, a bilateral environmental agreement had been signed and ratified. A joint bilateral commission on environmental matters was also set up and meeting regularly to exchange information. Visits had also been organised on mining hot spots.

This highlights how multilateral and bilateral governance activities can be used simultaneously and in combination to achieve further progress. This confirms that multilevel governance initiatives do not automatically entail a dispersion of energy. On the contrary, the combination of multilevel initiatives seems to provide some leeway for political arrangements to be set up far from media scrutiny. Finally, it shows that pre-existing contacts between states and their administration constitute a good background for cooperation.¹⁹⁴ The UNEP report indeed noted that the Tisza cooperation existed previous to the accident and a first agreement on the protection of the river and its tributaries had already been signed in 1986.¹⁹⁵

As David Swalley from the OSCE explained, many states may prove to be wary of regional constituencies.¹⁹⁶ The heated reaction of NGOs opposing the Rosia Montana gold mine project pointedly shows that distrust is commonplace among actors. However, the coordination of efforts between the different actors that took place after the Baia Mare accident shows that it is possible to influence processes positively from an international governance level. In the Environmental and Security initiative, international organisations also joined forces to make the best use of their

¹⁹³ This is what Isarescu told a joint news conference with visiting Hungarian Prime Minister Viktor Orban. See R. Dascalu, "Pollution problems bring Romania, Hungary together", *Reuters News*, 14 April 2000.

¹⁹⁴ Interview with Mariá Galambos, Budapest, 30 June 2008.

¹⁹⁵ K. Burnod-Requian, 2004, *op. cit.*

¹⁹⁶ Interview with David Swalley, Vienna, 15 June 2008.

various mandates. The OSCE benefits from a good credit among state administrations, while the UNEP can provide a strong technical expertise, the UNDP offer reliable field expertise from its national officials and the REC in Szentendre brings in the “civil society insights”, as an NGO platform. Finally the partnerships with NATO also proved to be quite useful insofar as they rely on the Science for Peace funding mechanism which can support R&D projects. This helps to overcome the reluctance of some former Soviet republic regarding the North Atlantic Treaty organisation.

The point we want to make here is that there is no predetermined level or combination of governance levels and tools. This is all the more true that the framing of the problems can open new opportunities, as well as close others, as will be seen in the Rosia Montana case. Distrust and competition do exist, but so does productive cooperation, and the REC is a good example of the fact that bilateral and multilateral levels of governance are interlocked, and not mutually exclusive. The intervention of the European Commission via the Task Force and the UNEP/OCHA mission contributed, in a sense, to the establishment of bilateral relations. We will now see that, contrary to the conclusions of the UNEP Rapid Assessment mentioned above, coordination existed between the different initiatives. In fact, this highlights the way actors from different organisations, with various statement missions and expertise, do actually interact. In our view, this interplay of actors is another positive dimension of the governance initiatives that emerged after the Baia Mare accident, and which are noteworthy for the future management of environmental crisis.

COORDINATION ENDEAVOUR: STRATEGIC INTERPLAY OF ACTORS

As already mentioned, the proliferation of governance initiatives in the Baia Mare case cannot be taken as an evidence of a lack of coordination. On the contrary, the accident appears to have offered good conditions for the growth of ideas and activities. As far as the coordination in the direct aftermath of the accident is concerned, a division of labour appears to have developed between the International Baia Mare Task Force, the UNEP mission, the ICPDR and the Regional Environmental Center, who, as a coordinating platform for NGOs, encourages public participation. One determining factor in the development of such inter-agency cooperation, and particularly so in the case of accidents, is that information is hard to

collect, and large organisations tend to rely on each other for its gathering.¹⁹⁷ This is why the information collected by the international organisations were used as reference points by all actors.

From the outset, the Hungarian government appears to have been a key player in this coordination endeavour. As Zsuzsana Arokhati from the Ministry of Environment and Water explains, a working group was set up to organise the coordination of the assistance.¹⁹⁸ In fact, many governments, international organisations and large multinational companies offered financial and technical assistance to the affected countries. Among the pledge of funds for the clean-up and the rehabilitation of the rivers were mentioned to us the assistance offered by the USA, the Dutch, the British and the Japanese governments.¹⁹⁹ The Norwegian government rapidly sent equipment for monitoring purposes. Australia pledged to help to alleviate the damages.²⁰⁰ France, with its experience in tackling ecological accidents, sent experts. US Army Corp engineers were sent to Baia Mare to work with local officials. The Dutch government gave \$41,000 to help the recovery of the fishermen affected by the spill. The Philip Morris company, which had opened a cigarette plant in the outskirts of Bucharest in 1998, contributed \$100,000 and Nokia, who had been interested in opening a telephone factory, offered \$90,000.

The idea of the working group was to match the assistance offered with the needs outlined at the local level. Money was allocated to the Regional Environmental Center who could then hold a call for tender for small grants, dedicated to NGOs in Hungary, Romania and Yugoslavia.²⁰¹ This highlights the role played by international organisations like the REC,²⁰² which had specialised experience and knowledge. It contributed to the global management of the crisis by producing its own assessment of the legal and domestic legal aspects of the Tisza river spill.²⁰³

The existence of this division of labour is confirmed in the report of the International Baia Mare Task Force, which acknowledges the contributions of the

¹⁹⁷ See [Commission communication] COM(2000) 664 final, Brussels, 23 November 2000.

¹⁹⁸ Interview with Zsuzsana Árokháti, Budapest, 25 June 2008.

¹⁹⁹ *Ibid.*

²⁰⁰ Australia is the largest investor in the Maramures in Romania. The country authorities had been informed by the Hungarian ambassador in Canberra about the accident as early as February 10th, 2000 and updated by the ambassador in Budapest, Mark Higgies, who was given a tour by the Hungarian ministry of Environment, of the Middle Tisza in Hungary that had been affected. See *BBC Monitoring*, "Australian envoy promises help for cyanide-stricken region", 14 March 2000.

²⁰¹ *The Bulletin*, "REC Grants", Vol. 9, n° 2, April 2000, p. 23. The Netherlands had donated 20 000 €, Japan US\$10 000, United Kingdom 10 000 £ and USA for Romania US\$25 000.

²⁰² See note 138.

²⁰³ *The Bulletin*, "The law of disaster", Vol. 9, n° 2, April 2000, p. 28.

UNEP/OCHA team in February and March 2000, as well as the results of studies undertaken by German and Dutch agencies and the WWF, and “a number of independent studies and investigations” on regulatory, engineering and environmental issues that had been especially commissioned.²⁰⁴ In addition, the REC contributed to the investigative process by producing a summary of the UNEP/OCHA Report, making the results available in Romanian, Hungarian and Serbian.²⁰⁵ Furthermore most of the programmes initiated and conducted by the REC set as their priority the avoidance of duplication. In its legal study conducted on the Baia Mare accident, the actions taken by NGOs in Romania (public awareness campaign, crisis cell formation, cooperation with local and regional officials and NGOs) and the endeavors of the government to improve its practices are reported.²⁰⁶ In keeping track of what was being done at the bilateral level for river planning of the Szamos/Somes river, but also at the regional and European level,²⁰⁷ the report demonstrates that initiatives were not taken randomly, and that the REC had a broad overview of all the different governance initiatives. This is interesting to note because a number of the actors that we met were not aware of the activities of other stakeholders. Most NGO activists confirmed how demanding their involvement had been on the Baia Mare/Rosia Montana cases,²⁰⁸ and how difficult it was to follow up on new developments over a long period of time. Funds and energy do tend to fade with time, as new issues require their attention.

At the regional level, on the contrary, attention to the accident was sustained. Some specific programmes were even initiated to coordinate action. The “Integrated sustainable development programme of the Tisa/Tisza river basin”, which has been implemented by the Regional Environmental Center and supported by the British embassy in Budapest, the UNDP Regional Bureau for Europe in Bratislava and UNEP DTIE funds,²⁰⁹ also originated from the Baia Mare accident. While focusing on the

²⁰⁴ Baia Mare Task Force, “Report of the International Task Force for Assessing the Baia Mare Accident”, December 2000.

²⁰⁵ P. Csagoly, 2000, *op. cit.*

²⁰⁶ See the concept paper prepared by REC and UNDP about the “Tisa/Tisza River Basin Integrated Sustainable Development Programme”, <www.rec.hu/tisza/concept.html>, accessed 5 May 2008.

²⁰⁷ REC, “International law and the Baia Mare Cyanide spill”, *Final report*, September 2003.

²⁰⁸ Interview with Jávör Benedék, Budapest, 27 June 2008; interview with Csaba Mezei, Budapest, 26 June 2008; interview with Róbert Fidusz, Budapest, 24 June 2008; interview with Anamaria Bogdan, Bucharest, 23 June 2008.

²⁰⁹ See <www.rec.hu/tisza/>, accessed 7 June 2008.

river, the initiative was meant to fill “the vacuum in the present range of initiatives in the field of ecologically sensitive rural economic development projects”.²¹⁰

The work of the International Convention for the Protection of the Danube River in relation with the Baia Mare spill also stands as a good illustration of the coordinating endeavor that has characterised the post-crisis management. In its conclusion, the Task Force recommended that the secretariat of the Danube Convention-ICPDR take an active role, supporting its ambition to extend their work to the Tisza sub-basin. The ICPDR is in charge of the implementation of the European Framework Water Directive (2000/60/EC), and for this reason promotes the coordination of actions among the Danube countries, amongst which one can find EU members, accession countries and other states. As an umbrella institution, the ICPDR can supervise pilot projects such as the one between Hungary and Romania, on cooperation over water management tools for the Körös/Crisuri Basin (tributary basin to the Tisza river) which was pursued with the financing of the French Global Environment Facility.²¹¹

To conclude on this aspect, it appears that the multinational, regional and national levels did create positive dynamics insofar as they could coordinate actions in the assessment phase, and orient projects and policies. We include the national level because states requested assistance, took part in the assessment missions and contributed to a regional inventory of hot spots. They can be the driving element of governance initiatives, but they can also be the weakest links.

Philip Weller from the ICPDR pointed out, for instance, that his organisation relied on national environment representatives who did not always have a lot of leeway inside their governments to push for the implementation of actions decided at the regional level.²¹² This was confirmed by Radu Cadariu from the Romanian Environment Ministry, when he acknowledged that the higher profile gained by his ministry in Romania²¹³ after the Baia Mare accident did not translate into additional

²¹⁰ Note that the REC-Regional Environmental Center is granted an observer status in the ICPDR <www.icpdr.org/icpdr-pages/observers.htm> and the Initial Phase final report was taken into account in the ICPDR, “Analysis of the Tisza river basin, 2007”, 2007.

²¹¹ See FFEM, “Transboundary river basin management of the Körös/Crisuri river project, Hungary-Romania. Pilot project including tool set up for the shared control and management of the river basin”, no date. The French government developed the French GEF in 1994 to subsidise projects that address biodiversity, international waters, the greenhouse effect, soil deterioration, persistent organic pollutants, and the ozone layer.

²¹² Interview with Philip Weller, Vienna, 17 June 2008.

²¹³ “Up until 1990, the word pollution hardly existed in our language”, in R. Wright, “Comment & analysis. A hard life in a dirty landscape”, *Financial Times*, 25 February 2000.

staff or budget.²¹⁴ The UNEP/OCHA Rapid Assessment summarised this issue by underlying the “wide variation in capacity” of the countries undergoing political transformation and economic readjustment.²¹⁵

This remark leads us to underline the limitations in the coordination of governance activities. It appears that if cooperation is an important feature of the Baia Mare case, because it highlights the opportunities for new initiatives and policy changes, it cannot be considered a sufficient condition for the success of governance initiatives. However, we argue that the limitations inherent in the attempt to coordinate the different governance strategies, and the strategies developed to bypass them, demonstrate the constructive potential of such limitations. Because these initiatives provide an array of promising approaches and useful tools, the Baia Mare case stands as an illuminating case for global governance.

OTHER BYPASSING TOOLS AND STRATEGIES: THE ROLE OF EXPERTISE

In this train of thought, we will now examine alternative strategies and tools. One interesting strategy has been to turn to the actors of the extractive industry directly involved in the accident, and stress the corporate social responsibility dimension of their activity. Another promising mechanism for the implementation of governance initiatives is the pilot project approach. Both say a lot about the key role that some actors can play, and the decisive importance of “expertise”, be it scientifically grounded, based on long experience and deep political understandings or just widely acknowledged by peers in the case of layman’s knowledge.

Among the bypassing strategies we have referred to already, the Principles of governance elaborated by the Regional Environmental Center are a noteworthy example, even if they still stand to be re-activated.²¹⁶ They stem from the study of the legal loopholes that the Baia Mare accident brought into light,²¹⁷ and emerged as a joint project conducted with an international law firm based in Bucharest. The objectives were to examine the adequacy of existing legal instruments in order to prevent such events from happening in the future.²¹⁸ Because most of the international

²¹⁴ Interview with Radu Cadariu, Bucharest, 23 June 2008.

²¹⁵ K. Burnod-Requian, 2004, *op. cit.*

²¹⁶ Interview with Stephen Stec, Budapest, 27 June 2008; with Alexios Antypas, Budapest, 30 June 2008.

²¹⁷ “The Law of disaster”, April 2000, *op. cit.*, p. 28.

²¹⁸ See S. Stec, A. Antypas, T. Jansen, E. Gulacsy, “International law and the Baia Mare cyanide spill. Final Report”, REC, September 2001, with the support of the Government of the United Kingdom.

efforts had focused on the issue of civil liability, the authors of the report focused on environmentally responsible investment, in an attempt to palliate to the fact that most international laws become dead letter from the moment they are signed.²¹⁹ One of the authors, Stephen Stec, explains that “increased democracy, accountability and transparency of government decision making only go so far (...) [and] changes in governance do not have much of an impact on global corporations”.²²⁰ This initiative also has to be understood with reference to the 2002-Johannesburg Earth Summit, where discussions were held on corporate governance.²²¹ At that same event, Friends of the Earth produced a report on the topic,²²² as did Greenpeace, who, mentioning the Baia Mare accident, labeled it a “corporate crimes”.²²³ More importantly, the Principles of governance derived from the experience of the authors, and their knowledge of national politics and policy processes. Tom Garvey,²²⁴ former head of the Task Force, presented a paper at the OECD global forum on international governance supporting and comforting this idea.²²⁵

Another strategy worth mentioning is the attempt to set the example in terms of responsible activity with pilot-projects whose funding is facilitated by the involvement and availability of different financial instruments.²²⁶ This constitutes in our view a real progress. As Viktoria Siposs from WWF-Hungary²²⁷ explained, the benefits of alternative water management strategies to improve flood control and pollution reduction can be demonstrated to the states representatives of the Tisza group through the pilot projects that the WWF-Hungary coordinates in the Tisza river region. In her view, the Baia Mare accident benefited from alternative and innovative

²¹⁹ S. Stec, A. Antypas, “Globalising hazardous activities: an instrument for investor risk and responsibility”, *Environmental Policy and Law*, vol. 34, n° 3, 2004, pp. 125-132.

²²⁰ S. Stec, “Principles on governance would rein in global corporations. Lessons learned from the Baia Mare spill were shared with the delegates in South Africa”, *The Bulletin*, vol. 11, n° 3, December 2002, pp. 12-13.

²²¹ *Ibid.*

²²² J. Feiler, C. Stark, “Mining after Johannesburg. An assessment of post World Summit on Sustainable Development Political Options”, *Mineral Policy Center*, Discussion paper, September 2002.

²²³ Greenpeace International, “Corporate crimes. The need for an international instrument on corporate accountability and liability”, June 2002.

²²⁴ Retired Deputy Director General for Environment of the European Commission who had been appointed head of the International Baia Mare Task Force.

²²⁵ T. Garvey, “Lessons from Baia Mare for Foreign Direct Investment”, presentation given at the OECD Global Forum on International Investment, “Conference on Foreign Direct Investment and the Environment. Lessons to be learned from the mining sector”, 7-8 February 2002, Paris.

²²⁶ See the medium-sized projects guidelines of the Global Environment Facility: <www.gefweb.org/Documents/Medium-Sized_Project_Proposals/MSP_Guidelines/msp_guidelines.html>, and European Union LIFE financial instruments: <<http://ec.europa.eu/environment/life/index.htm>>, accessed 30 July 2008.

²²⁷ Coordinator of the pilot projects on Tisza river floodplains alternative farming and wetland restoration.

initiatives because the existing models of management had shown to have reached their limits. Since the accident, it has been easier to promote alternative plans for water management and farming, and the regional framework offered by the Tisza group provides a useful platform to facilitate the dissemination of these ideas.

The same pilot project approach is followed by the Tisza group, who started, in June 2008, a project with funding from the GEF and with the assistance of the regional office of the UNDP in Bratislava. It consists in community-level demonstrations on the use and management of flood plain wetlands. Considered a test project at the local and regional levels of the different governance mechanisms of the Tisza river basin, it contributes, at a micro level, to a wider implementation effort in the field of water governance. The ENVSEC programme, as we will see in the conclusion, works with pilot projects in the Balkans, in order to overcome the lack of resources which weakens its third pillar dedicated to implementation.

Pointing out the positive examples and most promising bypassing tools and strategies that emerged in the wake of the Baia Mare spill does not mean that we consider this case to be the pinnacle of global governance of water. If accidents do seem to trigger more cooperative behaviour than more “ordinary” cases of chronic water transboundary pollution, they also suffer from the traditional limitations of global governance. We have mentioned already, in line with Mark Zeitoun, that a polarised view that strictly opposes conflict and cooperation can be misleading. This is an illustration of a case where governance schemes appear to have failed to deliver on some of their promises. This is why we would like, as a conclusion, to present a more complete and balanced appraisal of the contribution of the particular political momentum that emerged from the Baia Mare accident in terms of global governance. To do so, we will examine in more detail the efforts made to manage the remaining hot spots, as well as the limitations that actors were not able to surpass.

Our objective is to determine the lessons learned from the accident to improve the general understanding of these cases, and highlight which tools and strategies can be helpful for the managing of future environmental crisis. To do so, we will use the Rosia Montana gold mine case study as a counter-example to the development of governance initiatives, and explain why some of the initiatives developed after the Baia Mare accident failed to be adopted during the Rosia Montana controversy. We argue that the controversy that developed around this project reveals the limits of the “environmental/technological” framing strategy, and the need to open the debate on mining.

A CONCLUSION: A TENTATIVE GOVERNANCE APPRAISAL

As a conclusion, it is important to note that in spite of the many innovative tools and strategies that could be analysed in the wake of the Baia Mare case, many limitations still remain to be overcome. They nevertheless should be considered in light of their broader social and political context, in order to understand what the underlying explanations for these mixed conclusions are. Lessons from Baia Mare accident point to the preeminence of the scientific-technical approach used to frame the problem as an environmental question, rather than a political issue. As we will explain, this approach misses out on the social and economic aspects of mining, demonstrating the limits of this frame when it comes to concrete implementation.

We will now examine the coming about of such a controversy with a more detailed presentation of the Rosia Montana gold mine project, a new mining development we have referred to above, and see how such a polarized contentious case could deter some of the governance initiatives developed after Baia Mare. This reveals the underlying rationale of these accidents that tend to be masked by monolithic frames of understanding.

THE BAI A MARE PARADOX: OLD/NEW POLLUTION AND MINING DEVELOPMENT

As we have mentioned above, there are structural limits and agency obstacles when it comes to governance. In our case also, there exists some overlap between initiatives, highlighting the competition that can exist between and inside institutions; between the European Commission and the UNECE on environmental liability,²²⁸ or between

²²⁸ Interview with Hannes Descamps, (phone interview), 9 July 2008.

the UNECE and UNEP on accident prevention²²⁹ and even within national administrations, between the environment specialists and the water experts in Hungary.²³⁰ We have observed divergence among experts, for example on mining remediation plans.²³¹ Disagreement also exists on the relative legitimacy of the different experts. Hungarian NGOs had suggested names of experts to help the authorities supervise the Rosia Montana project, and do not recognize the legitimacy of the government designated advisor.²³² The scientific independence of experts was also a subject of controversy as some mining specialists were accused of working for different parties.²³³ The European Directive on mining waste has also been a disappointment for NGOs like the WWF-European policy office or the CEE Bankwatch because they consider, like Péter Kovacs from the Hungarian Ministry of Environment and Water, that the level of cyanide authorized is too high to protect the people and the environment from another cyanide spill. With some distance, it appears that the local political momentum borne out of the Baia Mare accident appears to have worn out all the more quickly as mining concerns focalized increasingly on a new mining project. Most governance initiatives, like the ENVSEC, had reached the critical stage of implementation. The Directive on Mining Waste had been voted in 2004 by the European Parliament, the Liability Protocol signed in 2003 in Kiev by 22 countries had only been ratified by Hungary. The regional cooperation around the Tisza was still in the making.

It appears to us that most governance initiatives missed out on the fact that there were actually two different problems enclosed in the one Baia Mare case: the cyanide spill that originated from the Aurul company, and the subsequent series of accidents that occurred at the state-owned mining site of Baia Borsa. Significantly, the international Baia Mare Task Force was commissioned to assess both cases. In the first case, however, a foreign investor was involved, implying the possibility of the existence of a polluter to pay for the damages caused. In the second case, it was the chronic problems of the Romanian mining sector that were brought into light, and with

²²⁹ Interview with Fritz Balkau, Paris, 4 July 2008.

²³⁰ Interview with Péter Kovács, Budapest, 24 June 2008. See M. Marmorat, "Socio-technical controversy around Gabčíkovo-Nagymaros hydropower dams in the Danube river basin 1977-2004 (Hungary/Slovakia). Micro-sociological study of international relations." Thèse de doctorat en science politique, Institut d'Etudes Politiques de Paris, December 2006.

²³¹ Interview with Alexander Zinke, Vienna, 18 June 2008; interview with Daniel Sardan and Anca Baciuc, Bucharest, 20 June 2008. See F. Kerssenbrock, "Fluch des Goldes", *Profil*, 15 November 2004.

²³² Interview with Robert Fidusz, Budapest, 24 June 2008.

²³³ See Greenpeace, "No UNDP support for ecocrimes at Rosia Montana!", press release, 27 February 2008.

it the Soviet legacy of an environmentally nefast extractive industry in Central and Eastern European countries.

The paradox we want to underline is that in the Baia Mare accident, the mining activities of the Aurul company from where the spill originated were actually contributing to the cleaning-up of the city from mining waste, insofar as the heaps of ore were been reprocessed. These heaps have by now been evacuated, reducing the risk of acid drainage.²³⁴ This accident focused the attention on the foreign investor, Esmeralda Exploration (later Eurogold). The Hungarian government eventually sued them for environmental damages, and the trial is still under way. A representative from Greenpeace International denounced at the time “a variant of eco-colonialism, extracting valuable raw materials and leaving waste behind”.²³⁵ Geoff Evans, executive director of the Mineral Policy Institute, an Australian NGO working with communities affected by mining stated that Australian companies “are exploiting the situation where standards in some countries like Romania are much lower than they are in Australia”.²³⁶

In contrast to this situation where a foreign investor could be blamed for the accident, the Romanian state endorsed the responsibility for the subsequent heavy metal spill from the Baia Borsa mine, because this facility was state-owned. These accidents made a very significant portion of the population aware of the potential scope and intensity of mining industry hazards. In the regional inventory which focused on the Tisza basin, twenty-four hot spots were pointed out, out of which nineteen were located on tailings deposits, ponds and mines.²³⁷ The enlarged inventory encompassing the whole Danube catchment area that was published a year later underlined that Romania ranked after Germany in the water risk index because of the “enormously high hazard potential of tailing ponds and wastewater dumps arising from a wide range of mining activities”.²³⁸ It was noted that “specific problems have been identified with the risk related to the old industrial installations deactivation

²³⁴ Interview with Alexander Zinke, Vienna, 17 June 2008. “The process and technologies used at the Baia Mare plant for recovering precious metals were completely new to Romania and were expected to be the most modern, safe and efficient in the region and a major environmental improvement.”, see P. Csagoly, “The cyanide spill at Baia Mare. Before, during and after”, Summary of the UNEP/OCHA Report, REC, June 2000, p. 4.

²³⁵ A. R. Savulescu, “Mine Waste Risk for European Rivers Still High”, *Environment News Service*, 6 April 2000. See K. Harper, “‘Wild Capitalism’ and ‘Eco-colonialism’: A Tale of Two Rivers”, *American anthropologist*, Vol. 107, n° 2, pp. 221–233.

²³⁶ *Greenwire*, “Design flaws, bad weather blamed for spill”, 21 April 2000.

²³⁷ ICPDR, Zinke Environmental Consulting, “Regional inventory of potential accidental risk spots of Romania, Hungary, Ukraine & Slovakia”, August 2000.

²³⁸ ICPDR, “Inventory of potential accidental risks spots in the Danube river basin”, Expert panel, November 2001.

and with the accidents caused by flood conditions and the landfills disposal sites of industrial wastes.” Sixty-seven accidental risk spots identified in the Danube basin were located in Romania.

Explanations for the limitations of most of the governance schemes are to be found in the limitations in the implementation pillar of governance initiatives, as well as in “the interaction between transitional political systems, economic readjustment and development”, as the author of the UNEP Rapid Assessment puts it.²³⁹ Our interlocutors also underlined that the focus of the ENVSEC’s programme shifted away from the Tisza region on account of Romania’s accession to the EU, and that it was now much more difficult to get funding from international donors.²⁴⁰ Brussels was now seen as the new financial provider but, as Radu Cadariu²⁴¹ from the Romanian ministry of Environment and Sustainable development explained, applying for funds requires skills. This raises in turn the question of the EU’s concern with Romania’s (and Bulgaria’s) lack of concrete results in the fight against corruption.²⁴²

Another reason for the fading out of Baia Mare political momentum has to do with the fact that NGOs, which often act as the watchdogs ensuring the follow-up of initiatives, also have limited resources, as well as a high staff turnover. This can impact negatively on the expertise they are able to produce over a long period of time. Sometimes, when a person leaves the group, the expertise and knowledge accumulated on specific events and matters goes missing too. The renewal of the whole team of the WWF Carpathian Danubian Programme based in Vienna illustrated this problem. The coordinator explained that no one from the new team had an in-depth knowledge of what happened in 2000.²⁴³ Anamaria Bogdan from Greenpeace Romania confirms that at the local level the large number of active participants who had enrolled in the spur of the moment on mining issues after the Baia Mare and against the Rosia Montana case shrank over time. These were mainly students who, as years went by, did not have the time to participate in civil actions. Eventually the decision was taken at Greenpeace Austria to stop the campaigning on mining in Romania.

²³⁹ K. Burnod-Requian, 2004, *op. cit.*

²⁴⁰ Interview with David Swalley, Vienna, 16 June 2008; interview with Stephen Stec, Budapest, 27 June 2008; interview with Christina Stuhlberger (phone interview), 9 July 2008.

²⁴¹ Interview with Radu Cadariu, 23 June 2008.

²⁴² See latest reaction after the bi-annual EU report, J. Dempsey, “Romania defends record on corruption”, *International Herald Tribune*, 21 July 2008.

²⁴³ Interview with Trine Bratrich, Vienna, 16 June 2008; interview with Philip Weller, Vienna, 17 June 2008.

All in all, these factors highlight how complex governance initiatives can be. There is not one explanation for their failure or their success. Some circumstances, like the one created by the Baia Mare political momentum, are favorable. Other conditions, like the ones described in the Rosia Montana case, appear to hinder cooperative schemes. Of course, the dispute over Rosia Montana does not explain the rather poor record of Romanian mining remediation measures.²⁴⁴ In our view, it emphasizes the need to question how problems (in our case “environmental problems”) are being framed, because this, in turn, has an impact on the way they will be tackled.

THE ROSIA MONTANA GOLD MINE PROJECT: A GOVERNANCE COUNTER-EXAMPLE

We argue that the controversy that surrounded the Rosia Montana gold mine project affected the implementation phase of some of the Baia Mare governance initiatives, such as the ENVSEC initiative. Our argument is based on the wariness that most international actors have demonstrated regarding “sensitive” and “securitized” issues,²⁴⁵ like the Rosia Montana gold mine project. Contrary to what could have been expected after the strong mobilisation in Baia Mare, this mining project did not turn out to be a field of experimentation for the new policy-recommendations borne out of Baia Mare spill. On the contrary, the dispute that settled in appears to have repelled governance schemes, tools and strategies.

It is important to note that by the time the Rosia Montana controversy reached a peak in 2004, the Environment and Security Initiative was completing the first steps of its program on mining issues, which consisted in the identification and the assessment of risks in South Eastern Europe and in the Tisza river basin. ENVSEC mining expert Philip Peck had produced a basis for action: “Policies and guidelines for

²⁴⁴ Note that two remediation projects of mining polluting sites are actually underway in Baia Borsa in the Maramures, and also in Deva in the Apuseni mountains where Rosia Montana is located. They are conducted by the National Agency for Mineral Resources in Bucharest with GEF and World Bank money. In 2004, the World Bank approved US\$150 million IBRD loan and a US\$7 million Global Environment Facility (GEF) grant to Romania to support the country’s readiness to combat natural disasters. The project is called “hazard risks mitigation and emergency preparedness project”, and will run until December 2009. Interview with Daniel Sardan and Anca Baciu, Bucharest, 20 June 2008.

²⁴⁵ See A. Leboeuf, E. Broughton, 2008, *op. cit.*

sustainable mining practice and closure of mines” that was presented and endorsed in May 1995 at a Cluj-Napoca sub-conference on “reducing mining risks”.²⁴⁶ In an introductory statement to the report, the representatives of the leading ENVSEC organisations explained their “focus on participatory assessments and targeted follow-up activities in conflict-prone areas “ and stressed the belief that they “can help communicate to achieve environmentally sound development and peace on the ground”.²⁴⁷

This implementation stage was critical because, as David Swalley and Stephen Stec explained,²⁴⁸ for ENVSEC, the mandates of international organisations only go so far as states’ sovereignty allow them to, and in any case, funds are highly insufficient to implement the policies. The Rosia Montana project appeared in that sense a great experimental field for the guidelines developed in the report “Mining for closure”. Not only was foreign capital being invested in a large amount in a destitute industrial sector, but the project was also placed under close scrutiny after the Baia Mare accident because of an increased awareness of the public on its potential environmental impacts, as well as an increased political clout of the national environmental institutions.²⁴⁹ Since Romania was to join the European Union, the legislative harmonisation process would eventually apply stricter control over these activities. Starting from 2000, the European commission began to report some progress in the reform of Romanian environmental protection authorities at the local level,²⁵⁰ in the ratification of international convention and in the transposition of the environmental “acquis communautaire”.²⁵¹

The implementation of guidelines was crucial not only to remedy the remaining hot spots, but also because of the need to monitor the sustainability of the foreign investment during the privatisation of state-owned mining sites and facilities. Prices of mineral resources being so high, it is very likely that mines will be reopened,

²⁴⁶ ENVSEC, 2005, *op. cit.* Interview with Stephen Stec, Budapest, 27 June 2008; interview with Alexios Antypas, Budapest, 27 June 2008; interview with Stephanie Roth (phone interview), 22 June 2008; interview with Róbert Fidusz, Budapest, 24 June 2008; interview with Jasmina Bogdanovic, Vienna, 17 June 2008.

²⁴⁷ See statement from representatives of UNEP, UNDP, OSCE, NATO-Security through science programme in P. Peck, “Mining for closure. Policies and guidelines for sustainable mining practices and closure of mines”, ENVSEC, 2005.

²⁴⁸ Interview with David Swalley, Vienna, 26 June 2008.

²⁴⁹ Interview with Radu Cadariu, Bucharest, 23 June 2008; interview with Daniel Sardan and Anca Dariu, Bucharest, 20 June 2008; interview with Alexander Zinke, Vienna, 17 June 2008.

²⁵⁰ Confirmed by Alexander Zinke, Vienna, 17 June 2008.

²⁵¹ See Summary of Commission Report, “Romania – adoption of the community acquis”, <<http://europa.eu/scadplus/leg/en/lvb/e15108.htm>>, accessed 6 July 2008.

according to Anca Baciú, director of the project management unit in charge of hazards risks at the Romanian National Agency for Mineral Resources-NAMR.

As mentioned in the first part, the Rosia Montana project triggered a powerful opposition, illustrated most strongly in the refusal of local land-owners to sell their houses to the Rosia Montana Gold Corporation. Strong objections emanated from Hungary and other transnational advocacy networks involved in mining issues.²⁵² The project thus catalysed many forces, but it did so in a dualistic manner. Actors would either oppose the project, or promote it, but there was no consensus possible on any aspect of the issue, be it social, economic, or technical. For this reason, the controversy can be compared to a situation of trench warfare.

On the one hand, the Canadian company, Gabriel Resources, which wishes to exploit gold in Rosia Montana is described as “modern-day vampires, who in the name of progress aim to bleed Rosia Montana to death”.²⁵³ The company is seen as fostering a megalomaniac endeavor reminiscent of Ceaucescu times when the environment and large communities were sacrificed. On the other hand, the opponents to the project are presented as holding a “fundamental objection to industrialization itself” having “strong preservationist ethic”²⁵⁴ and wanting to kill a village desperately looking for a way out of poverty. Like the Baia Mare accident, the controversy made the international headlines²⁵⁵ and is still very active on the internet, on account of the international campaign staged by the local NGO Alburnus Maior. The company Gabriel Resources spent a lot of money contradicting these arguments,²⁵⁶ and many editors known for their environmentalist’ bashing arguments promoted the project.²⁵⁷

²⁵² See for example Friends of the Earth, Oxfam...

²⁵³ See Stephanie Roth’s discourse for the Goldman award <www.foei.org/en/who-we-are/about/news/goldman3.html>, accessed 7 July 2008.

²⁵⁴ K. Leech, “Ten Golden Myths: Ten Outrageous Myths Peddled About the Gold Mine in Rosia Montana, Romania”, <www.goldenmyths.com>, accessed 7 July 2008. See K. Leech, “If the gold mine doesn’t happen, our village will die.”, *Spiked*, 2 October 2006. Note that the editor of *Spiked*, Brendan O’Neill is campaigning against environmentalists. See B. O’Neill, “Greens are the enemies of liberty” “Environmentalists want to curb our freedom far more than the government’s anti-terrorist laws ever will”, *The Guardian*, 15 July 2008.

²⁵⁵ J. Fund, “Make your own mind. An impoverished town strikes gold”, *The Wall Street Journal*, 21 August 2007.

²⁵⁶ See the documentary “Mine your own business” from Phelim McAleer and Ann Mc Elhinney described as a Michael Moore-style documentary touting the benefits of the development. <www.mineyourownbusiness.org>, accessed 8 June 2008. See A. Hoffman, “Fighting fire with fire”, *Mining reporter*, 20 November 2006.

²⁵⁷ See P. Driessen, “Keeping Romania impoverished. Anti mining campaigns will perpetuate unemployment and environmental degradation”, *Center for the Defense of Free Enterprise*, 30 August

During the ENVSEC sub-regional conference that took place in Cluj-Napoca in May 2005, a heated discussion opposed a representative of the Alburnus Maior and a speaker, who was arguing that mining companies ought to contribute to local sustainable development and community wellbeing.²⁵⁸ The lack of understanding and the alienation that resulted from this exchange reveals the limits of such dualistic controversies: one who does not oppose the project is automatically categorised as an enemy.²⁵⁹ This also illustrates the limitations of the governance initiatives in such sensitive and polarised contexts. Renowned experts refused to get involved, and both the European Commission and the UNDP²⁶⁰ adopted a low profile on the issue. The UNDP Bratislava Regional Office was criticised last year for meeting representatives of the Canadian investor Gabriel Resources about a potential partnership on sustainable mining.

In cases of new developments in the mining industry, such as the Rosia Montana case, international organisations which had been active on mining issues tend to expect from foreign investors that they put into practice guidelines for sustainable mining, and ensure the cleaning-up of the hot spots. This point is stressed by the authors of a recent publication of the UNEP/Grid Arendal²⁶¹ initiated by the Environment and Security Initiative, in a chapter called “pros and cons of gold mining in Rosia Montana”. The potential and promised benefits of such a project are put into question,²⁶² potentially jeopardised by the “relentless opposition” that had been “highly vocal nationally and internationally”. The Rosia Montana controversy had the effect of weakening the political momentum stimulated by the Baia Mare accident, and diverting interest and efforts away from the remaining hot spots.

2007, <www.cdfc.org>, accessed 24 July 2008; see S. Milloy, “Green hypocrisy’s gold standard”, *Junk Science*, 20 September 2007, <www.cdfc.org/index.html>, accessed 9 June 2008.

²⁵⁸ See transcript of Stephanie Roth’s reaction, in ENVSEC, 2005, *op. cit.* pp. 31-32.

²⁵⁹ Open Letter to the Romanian Government – “The Roşia Montană Mining Project”: a consequence of the weakness of the rule of law in Romania, <www.osf.ro/en/comunicate_detaliu.php?comunicat=39>, accessed 30 May 2008.

²⁶⁰ See the polemic over an eventual partnership between the UN Bratislava Regional Office and the Canadian investor Gabriel Resources, who wishes to develop the mine at Rosia Montana. Press release from Greenpeace, Alburnus Maior (local NGO opposing the project in Romania), “NO UNDP support for ecocrimes at Rosia Montana”, Bratislava, February 2007. See open letter sent by Greenpeace and Alburnus to the director of the UNDP the same day. The authors “strongly oppose such partnership which would only tarnish UNDP’s reputation”.

²⁶¹ GRID-Arendal is an official collaborating centre of the United Nations Environment Programme (UNEP). Established in 1989 by the Government of Norway as a Norwegian Foundation. GRID stands for Global Resources Information Database.

²⁶² Balkan Vital Graphics, “Environment without borders”, ENVSEC, 2007.

LESSONS LEARNED

One of the main lessons to be learned from the Baia Mare case is that a fixed combination of interstate diplomacy, NGO pressure or expertise inputs from specialised international organisations does not exist. What emerges instead is a mosaic of institutional governance initiatives, where many levels of governance interlock and a wide range of actors interact. Because the Doñana spill proved that mining sites could also go wrong in well developed countries with strong regulations and institutional frameworks, one should be open to alternative initiatives and informal settings.

Ken Conca describes such alternative initiatives as “several parallel, distinct trajectories of normative development, rooted in diplomacy, technical and administrative expertise, neoliberal economic adjustment and social activism”.²⁶³ In the management of the Baia Mare accident, we have seen that preexisting regional cooperation frameworks like the ICPDR or the REC can make a major difference. Yet when a sensitive issue arises, governments favour bilateral negotiations and try to avoid bringing the issue to a higher negotiation level. It is also important to always bear in mind the importance that the particular frame used to present an issue has on the way this issue will be managed.

The characteristics and the complexity of the issues at stake in cases of industrial accidents and transboundary pollution explain why a combination of forces is a working one. Such issues necessitate a lot of expertise and specialised technical knowledge, and are therefore not an exclusive domain of inter-state diplomacy. However, such combinations do not exclude the states altogether, but rather open up new opportunities for action. The variable settings enable informal arrangements that can bypass inherent limitations caused by structural weaknesses or unfavorable conjunctures.

This proved to be the case in the transboundary pollution of the Raab river, known as the “foaming river”, which originated from Austrian leather companies and contaminated the downstream Hungarian waters. As Mária Galambos chief counselor for the Hungary Ministry of Environment and Water underlines, it can be embarrassing to bring up such sensitive issues when one has a deep relationship with its counterparts.²⁶⁴ Péter Kovács also confirms that these problems are dealt with in

²⁶³ Ken Conca, 2006, *op. cit.*

²⁶⁴ Interview with Mária Galambos, Budapest, 30 June 2008.

higher political spheres, and only when the tension is defused is the dossier passed down to the operational level.

From what we have learned, we can argue that if this Austrian/Hungarian case of industrial transboundary water pollution shows the limits of regional dialogue, it does not discard the influence played by the climate of trust that was established at the Danubian level by the ICPDR. As in the Baia Mare accident with its massive fish kill, the foaming of the river was a fact hard to ignore, and it boosted both preexisting cooperation mechanisms and the implementation of bilateral agreements and pollution prevention measures. In this foaming river case, we can also see how the different levels of governance constructively added up: the diplomatic discussions, the local protest organised at the local level in Hungary in Szengotthard, the water sampling analysis supervised by Greenpeace-Hungary and its public awareness campaign organised in Austria,²⁶⁵ the improvement of the companies' operating process, the debate over the industrial use of water.²⁶⁶

The lessons drawn from the Baia Mare accident show that civil actions can only go so far as the political and legal frameworks allow them to. At the same time, social pressure can be a decisive factor to raise the profile of ecological safety control, which can in turn possibly lead to a bilateral agreement on monitoring and the exchange of information. This is what happened between Russia and China in the case of the Songhua river pollution. The moral pressure exercised by NGOs and international media scrutiny can ease the pressure felt in local environmental protection bureau and courts, usually subject to political and economic constraints.

There are no given causal pathways in complex social systems, but we have shown that opportunities for cooperation on transboundary issues exist, and that "security" and "environmental/technical" frames can be stimulating trump cards. Elisabeth Economy's analysis of Chinese ecological issues confirms that the "environmental" framing of the impacts on the environment of the extremely rapid economic development of the country can be a productive approach. Because "environment is one of the leading cause for social unrest" in China and because the environmental protests against chemical, pharmaceutical and battery factories that

²⁶⁵ See "Quarrel over Raab pollution flares up again", Wien International, 28 February 2008.

²⁶⁶ See UNIDO (United Nations Industrial Development Organisation) Technology Foresight Summit in «Water productivity in industry» in Budapest, September 2007, www.unido.org/index.php?id=128&tx_ttnews%5Btt_news%5D=44&tx_ttnews%5BbackPid%5D=6&cHash=d5eb16898d, accessed 30 July 2008.

were polluting land and water have been receiving increasing international media attention.²⁶⁷

Yet we have seen, in the Baia Mare case and in the related Rosia Montana controversy, that the way the problems are framed influences the behaviour of actors. If accidents can be a driving force and offer political momentum for many institutions to push forward good governance initiatives, a dualistic controversy over similar issues can hinder them. “Security” or “environmental/technical” framing, which are the predominant ones in the case studies of this study, often contribute to mask the important cultural, social and existential dimensions of the contemporary environmental crisis.²⁶⁸

Contrary to the dichotomised positions of the opposing parties in the Rosia Montana controversy, these crisis are not simply confrontations between irreconcilable principles. In fact, there are no predetermined societal responses, neither are there inevitable outcomes in cases of industrial accidents and transboundary water pollution. Debates are still open on the management of natural resources or the prevention of pollution, because there are still a lot of scientific uncertainties that need to be clarified. Accidents do contribute to shed a light on these uncertainties, and to stimulate awareness on the environmental safety risks of the mining industry. Catch-22 situations discourage actors from offering alternative views that would challenge the manichean representation of interests.

²⁶⁷ See E. Economy, 2004, *op.cit.*

²⁶⁸ S. Lash, B. Szczerzynski, B. Wynne, “Introduction: ecology, realism and the social sciences”, in S. Lash, B. Szczerzynski, B. Wynne Risk (eds.), *Environment and Modernity*, London, Sage publications, 1996, p. 1.

PROSPECTS AND RECOMMENDATIONS: MANAGING FUTURE ENVIRONMENTAL CRISES

PROSPECTS ON MINING AND ENVIRONMENTAL MANAGEMENT

As far as prospects are concerned, it seems important to stress that for the most part, and in spite of the proliferation of initiatives in the wake of Baia Mare accident the challenges of mining and transboundary waste pollution in this region remain to be tackled. Prevention measures have been reinforced, awareness has been raised, guidelines have been provided, national monitoring and reporting mechanisms are underway, but the concrete implementation of sustainable solutions, as well as the preparedness of the population and the natural environment, remain to be enacted. Now that the Baia Mare momentum has faded, issues relating to mining technologies and pollution risks only make the headlines when a new project financed by foreign investor is advertised, or when a new spill occurs, as occurred in Slovakia, in the town of Kremnica, where the “gold practices have been revived”²⁶⁹ by a Canadian company called Tournigan Gold, attracting the attention and action of the same activists: CEE Bankwatch, Greenpeace etc. Yet, there are no national debates, let alone regional debates on these topics. As Csaba Mezei, the Hungarian office manager for Greenpeace underlines, such a discrete Central European region does not really exist, so his organisation did not see the point in campaigning on a regional level on

²⁶⁹ See M. Durianova, “Gold issue returns to Kremnica. A chance to revive the town or exposure to environmental risks?”, *Slovak Spectator*, 19 December 2005.

mining issues.²⁷⁰ For instance, in spite of the transboundary risks that still exist, many of our Hungarian interlocutors who had had a proactive role during one or the other campaign, considered the campaign that was organised in Romania on the ban of cyanide in mining²⁷¹ to be a strictly Romanian affair. As the Ministry of Environment and Sustainable development suspended the review process of the environmental impact assessment that was carried out by the mining company,²⁷² the mining project was frozen and the construction works delayed. As a consequence, NGO interest in the issue decreased, along with the will to sign the petition. Attention shifted away from the Rosia Montana case, and commitment to campaign against it decreased.²⁷³

Lessons from Baia Mare case stress the need to encourage and open debates to a large audience, in order to talk about actual water pollution prevention and preparedness as a way of limiting the local and transboundary impacts of accidents. Such debates are also crucial because of all the potential risks that remain to be remediated, and of the predicted development of mining. As the authors of Balkan Vital Graphics acknowledged, “the appalling social and environmental consequences of past mining activities are still all too apparent in many areas in Romania”²⁷⁴ to make mining development a consensual issue. Because many countries, like Kosovo, are in no position to choose from a range of development options, mining can simply be the best option available since “much of its wealth lies underground”.²⁷⁵ Parallel to this idea, many people feel that re-mining operations undertaken by foreign investors in Romania, as on the Baia Mare site, could be a way of solving the pollution problem. Cleaning-up would thus be part of a package for the processing of ore, or a way of making new profit out of reprocessed waste.

The Rosia Montana controversy proves that no clear economic and social vision of the mining sector exists, although the development of the Romanian economy is reliant on the revenues generated by non-energy raw materials.²⁷⁶ Yet, knowing that most of the opponents to the afore mentioned mining projects are not opposed to mining by principle, an open debate might help clarify those grounds.

²⁷⁰ Interview with Csaba Mezei, Budapest, 26 June 2008.

²⁷¹ See official website of the campaign “Cyanide free Romania”, <www.bancyanide.ro>, accessed 2 May 2008.

²⁷² *Metals Week*, “Romania blocks Rosia Montana gold mine”, Vol. 78, n° 38, 17 September 2007.

²⁷³ Activists confirmed that they would still sign the petition. See the latest open letter: “Stop mining related river pollution in the Danube and Tisza river catchments!”, 31 July 2008, <<http://rosiamontana.org/en/index.shtml>>, accessed 20 August 2008.

²⁷⁴ Balkan Vital Graphic, 2007, *op. cit.*, p. 42.

²⁷⁵ *Ibid.*

²⁷⁶ See *Rompres*, “Romania may cover, in a few years, some 15% of the non-energy raw materials' deficit in the EU”, 16 May 2008.

According to mining specialist Fritz Balkau, “sustainable mining” does not exist as an operational concept. It is therefore necessary to discuss and decide on a vision for the future evolution of the mining sector in Romania, and determine the terms of a Romanian sustainable mining sector. This is also the point of view adopted as a basis for action by the ENVSEC initiative, for which:

it is reiterated that a fundamental point of departure is the view that ongoing mining activities are vital to sustainable development and environmental protection in South Eastern Europe and in the Tisza river basin in general.²⁷⁷

To conclude, in line with the lessons learned, we would like to point out the prospects for the duplication of pilot projects for the management and reduction of the transboundary risks associated with mining activities. Some initiatives taken by the ENVSEC in the Balkan or the UNECE are noteworthy in this regard, and can pave the way for future replication elsewhere. Pilot projects are underway in South Eastern Europe under the supervision of the ENVSEC initiative. Two technical workshops addressed to local operational officials and national environmental representatives have been organised by mining experts on innovative techniques and technologies. Pilot projects are being selected in Albania to act as the experimentation field of internationally funded remediation programmes.²⁷⁸

Finally, another pilot project was initiated in January 2006 in Central Asia around the Jeroy gold and copper mine, located in the Talas river basin in Kyrgyzstan, because of its potential transboundary impacts in Kazakhstan. The UN Economic Commission for Europe – UNECE and the OSCE joined forces to ensure the implementation of the Environmental Impact Assessment Convention in a Transboundary context, also called Espoo convention.²⁷⁹ They collaborate with the Kyrgyz national environmental agency to encourage the development of a subregional cooperation framework within the wider framework of the Central Asian Initiative.²⁸⁰ Time will tell if these pilot projects hold their replication promises, and if prior multilevel action plan can actually ensure the good governance of mining activities.

²⁷⁷ P. Peck, 2005, *op. cit.*

²⁷⁸ Interview with Alexander Zinke, Vienna, 17 June 2008; interview with Christina Stuhlberger, 9 June 2008.

²⁷⁹ See <www.unece.org/env/eia/>, accessed 6 August 2008.

²⁸⁰ Interview with Bo Libert, 3 July 2008. See pilot study, <www.unece.org/env/eia/central_asia.htm#Kkpilot>, accessed 6 August 2008.

RECOMMENDATIONS

Do not wait for accidents to happen to get prepare, generate momentum for action and initiate multi-stakeholder processes of action. As this study shows, water pollution, when it cannot always be prevented, can be better managed and dealt with when efforts are made to prevent it and prepare for it.

WATER POLLUTION PREVENTION

Identify and map water pollution hot spots

- Identify and map all “hot spots”, including in the mining sector. Make information about national hot spots public.
- Encourage the remediation projects on designated “mining hot spots” and increase the budget allocated for such efforts to the adequate agency or ministry. Raise funding based on the previous experiences.

Promote an open and public debate

- Promote awareness and open debates on critical environmental problems to complete the Tisza Integrated River Management plan due in 2009.
- Make renewed efforts to promote dialogue and open debate on what sustainable mining could be to ensure accepted and acceptable development of mining sites and prevent mining-related pollution problems. This includes promoting dialogue between local communities, civil society groups, business actors, regional and international institutions.
- Encourage open debate over the problem of pollution reduction, including within water management national schemes (i.e the role of floodplains and wetlands).
- Promote diplomatic endeavours and international debate on transboundary industrial hazards (i.e ratification of the Liability Protocol).
- Promote the issue of environmental protection in relation to mining activities at the sub-regional and regional level, between the constituencies riparian to watersheds.

Develop and apply new regulations and standards

- Work towards the signing and the ratification of environmental protection agreements with neighbours.
- Encourage the reviewing process of national mining laws and regulations. For example, incorporate social and environmental standards in trade agreements and in national investment policies in the field of mining.
- Encourage all investors to apply self-conduct “Principles of governance”
- Promote the implementation of the report: “Mining for closure”.

Develop pilot projects to prevent pollution:

- Support the funding of new pilot projects, for example in the Upper stretch of the Tisza.

WATER POLLUTION PREPAREDNESS

Create a cooperative framework to prepare for any industrial accident:

- Keep up and develop the Early Warning system/ Accident Emergency warning system that enabled rapid communication at the local level.
- Ensure good technical cooperation at the operational level on a national, regional and international scales, to prevent, manage, and remedy cases of water pollution, especially those related to mining activities.

Organise regular simulations to test the existing framework:

- Organise table-top simulations and real-life exercises regularly to test the early warning system and the cooperative working framework, and to improve it. It will help all stakeholders to get used to working together.
- Identify the experts, include them in interstate dialogue and public awareness programme. Organize workshops to develop professional training on these matter for concerned civil servants and local representatives.
- Develop civil protection preparedness programmes and implement the UNEP APELL programme that aim at minimizing the occurrence and harmful effects of technological accidents and environmental emergencies.

Organise the collection of data in case of an accident

- As data collection will be an issue in any accident, regarding inter alia legal issues (compensations), a system for data collection should be developed in advance, to avoid both a lack of timely information and the multiplication of studies and evaluation missions. Such a system could be directly linked to the early warning system.

MANAGING TRANSBORDER POLLUTION CASES

Insure efficient and open communication processes.

- Make information about transboundary environmental cases public as fast as possible. An efficient and open communication around the issue is a critical part of any accident management.

Avoid the politicisation or securitization of the pollution issue.

- Provide strong political support to efforts made to manage the pollution by every stakeholder, coordinating work with the operational personnel.

KEEP THE MOMENTUM GOING

- Make sure the momentum to deal with the case of pollution is maintained until the hot spots have been erased, as an emergency mode of action may not be sufficient to sustain lasting improvements.

ANNEX – LIST OF INTERVIEWS

Alexios Antypas, Assistant professor, CEU–Central European University, Budapest, Hungary, 30 June 2008.

Zsuzsana Árokháti, Senior Advisor, Minister of Environment and water, Strategic Department, International Relations Section, Budapest, Hungary, 25 June 2008.

Anca Baciú, Director, National Agency for Mineral Resources, Hazards risk mitigation and emergency preparedness, Bucharest, Romania, 20 June 2008.

Fritz Balkau, Mining specialist (retired from UNEP– DTIE Paris) , Paris, France, 4 July 2008.

Jávor Benedék, Funder & spokesman, Védjegylet, Budapest, Hungary, 27 June 2008.

Jelena Beronja, Project Manager for South Eastern Europe, UNEP; ENVSEC regional desk officer, Vienna, Austria, 17 June 2008.

Anamaria Bogdan, Public relations & campaigning manager, “Save the Danube delta” NGO; Former communication officer, Greenpeace – Romania, Bucharest, Romania, 23 June 2008.

Jasmina Bogdanovic, Project officer, UNEP/Grid Arendal; Former ENVSEC coordinator, Vienna, Austria, 16 June 2008.

Radu Cadariu, Director of department, Ministry of Environment and sustainable development, Pollution control and risk management Directorate, Bucharest, Romania, 23 June 2008.

Antonela Capelle Pogacean, Researcher, Ceri-Sciences-Po, Paris, France, 28 May 2008.

Andreea Chifan, Programs Manager, Soros Foundation Romania, Bucharest, Romania, 20 June 2008.

Hannes Descampes, Expert on Environmental liability, Ministry of Environment, Interview by telephone, 9 July 2008.

Róbert Fidusz, CEE Bankwatch, Friends of the Earth-Hungary, Budapest, Hungary, 24 June 2008.

Mariá Galambos, Chief Counselor, EU & international, Minister of Environment and water, Budapest, Hungary, 30 June 2008.

Diana Heilmann, Program officer (Coordinator for the Tisza Group), ICPDR, Vienna, Austria, 18 June 2008.

Alexandra Ionescu, Professor of political science (PhD thesis on Romanian politics), University of Bucharest, Bucharest, Romania, 19 June 2008.

Péter Kovács, Deputy head of Department, Minister of Environment and water, Department of river management and water protection; ENVSEC national focal point; Co-chairman of the Tisza Group, Budapest, Hungary, 24 June 2008.

Bo Libert, Regional Adviser on Environment, UNECE- UN-Economic Commission for Europe, Environment, Housing and Land Management Division; Focal point for ENVSEC, Interview by telephone, 3 July 2008.

Csaba Mezei, Office manager, Greenpeace – Hungary, Budapest, Hungary, 26 June 2008.

Monica Moldovan, Head of energy and environment, UNDP Romania, Interview by telephone, 23 June 2008.

Sergiy Moroz, Freshwater officer, WWF European Policy Office, Brussels, Belgian, 2 June 2008.

Stephanie Roth, Coordinator, Alburnus Maior NGO, Interview by telephone, 20 June 2008.

Daniel Sardan, Project manager - In charge of the remediation pilot project with World Bank and GEF, National Agency for Mineral Resources, Bucharest, Romania, 20 June 2008.

Viktoria Siposs, Tisza river officer, WWF–Hungary, Budapest, Hungary, 25 June 2008.

Stephen Stec, Senior legal specialist, associate scholar, Regional Environmental Center for Central and Eastern Europe, Leiden University, the Netherlands; Member of the ENVSEC board, Szentendre, Hungary, 27 June 2008.

Cristina Stulhberger, Project officer, UNEP-GRID Arendal, ENVSEC, Interview by telephone, 9 July 2008.

David Swalley, Regional Desk Officer for the Southern Caucasus, OSCE; ENVSEC initiative representative, Vienna, Austria, 15 June 2008.

Renate Weber, European Deputy for Romania; Former executive secretary for the Soros Foundation in Romania, Brussels, Belgium, 2 June 2008.

Philip Weller, Executive secretary, ICPDR; Participated in the Baia Mare Task Force organized by the European Commission in 2000 as WWF Danube Carpathian programme coordinator, Vienna, Austria, 18 June 2008.

Alexander Zinke, Water management specialist, Environment Consulting for Central & Eastern Europe, Vienna, Austria, 18 June 2008.

BIBLIOGRAPHY

BOOKS

J. Barnett, *The meaning of environmental security. Ecological politics and policy in the new security era*, London, Zed Books, 2001.

K. Conca, *Governing water. Contentious transnational politics & global institution building*, Cambridge, The MIT Press, 2006.

K. Conca, G.D. Dabelko (eds.), *Environmental peacemaking*, Baltimore, John Hopkins press, 2003.

S. Dalby, *Environmental security*, Minneapolis, University of Minnesota press, 2002.

D.H. Deudney, "Environmental security. A critique", in D.H. Deudney, R.A. Matthew (eds.), *Contested grounds. Security and conflict in the environmental politics*, New York, State university of New York Press, 1999, pp.187-219.

E. Economy, *The river runs black. The environmental challenge of China's future*, Ithaca, Cornell University Press, 2004.

L.H. Ford, "Challenging the global environmental governance of toxic waste: social movement agency and global civil society", in D.L. Levy, P.J. Newell (eds.), *The business of global environmental governance*, Cambridge, The MIT Press, 2005.

Z. Gille, *From the cult of waste to the trash heap of history, The politics of waste in socialist and postsocialist Hungary*, Bloomington & Indianapolis, Indiana University Press, 2007.

J.A. Hannigan, *Environmental sociology. A social constructionist perspective*, London, Routledge, 2002.

A. Ionescu, "Du parti-Etat à l'Etat des partis. Nature et fonctions des partis politiques post-communistes en Roumanie", Thèse de doctorat en science politique, Institut d'Etudes

Politiques de Paris, December 2007.

S. Jasanoff, "Technology as a site and object of politics", in R. E. Goodin, C. Tilly (eds.), *The Oxford Handbook of contextual political analysis*, Oxford, Oxford University Press, 2006.

S. Jasanoff, *Learning from disaster. Risk management after Bhopal*, Philadelphia, University of Pennsylvania Press, 1994.

S. Lash, B. Szerzynski, B. Wynne, "Introduction: ecology, realism and the social sciences", in S. Lash, B. Szerzynski, B. Wynne Risk (eds.), *Environment, and modernity*, London, Sage publications, 1996.

M. Marmorat, "Socio-technical controversy around Gabcikovo-Nagymaros hydropower dams in the Danube river basin 1977-2004 (Hungary/Slovakia). Micro-sociological study of international relations." Thèse de doctorat en science politique, Institut d'Etudes Politiques de Paris, December 2006.

N. Peluso, M. Watts, *Violent Environment*, Ithaca & London, Cornell University Press, 2001.

JOURNAL ARTICLES

S. Argeseanu Cunningham, "Incident, Accident, catastrophe: cyanide on the Danube", *Disasters*, Vol. 29, n° 2, 2005, pp. 99-128.

A. Capelle-Pogacean, "Les relations hungaro-roumaines et la question des minorités magyares", *Etudes du CERI*, n° 12, janvier 1996.

K. Conca, "In the name of sustainability. Peace studies and environmental discourse", *Peace and Change*, Vol. 19, n° 2, April 1994, pp. 91-113.

P.H. Gleick, "Water and Conflict: Fresh Water Resources and International Security", *International Security*, Vol. 18, n° 1, Summer 1993, pp. 79-112.

Green horizon, "Central and Eastern Europe floods apparently part of worsening trend caused in part by environmental degradation", Vol. 4, n° 14, 14 August 2002.

T. Hagmann, "Confronting the concept of environmentally induced conflict", *Peace, Conflict*

and Development, n° 6, January 2005.

K. Harper, "‘Wild Capitalism’ and ‘Eco-colonialism’: A Tale of Two Rivers", *American anthropologist*, Vol. 107, n° 2, pp. 221–233.

S. Jasanoff, "New modernities: reimagining science, technology and development", *Environmental Values*, n° 11, 2002, pp. 253-276.

A. Leboeuf, E. Broughton, "Securitization of health and environmental issues: process and effects. A research outline", Ifri, *Document de travail*, May 2008.

K.T. Litfin, "Constructing Environmental Security and Ecological Interdependence", *Global Governance*, Vol. 5, n° 3, July-September 1999.

I. Miro Kiss, "The blond is dead. The Tisza river disaster", *Central Europe Review*, Vol. 2, n° 7, 21 February 2000.

E. Mühlenhover, "Social movements and the transborder chloride pollution of the Rhine river", *Proses Les Cahiers*, n° 2, juillet 2001, pp. 4-34.

S. L. Postel, A. T. Wolf, "Dehydrating conflict", *Foreign Policy*, September/October, 2001.

S. Stec, A. Antypas, "Globalizing hazardous activities: an instrument for investor risk and responsibility", *Environmental Policy and Law*, Vol. 34, n° 3, 2004, pp. 125-132.

PRESS ARTICLES

AFP, "Boliden boss summoned over Spanish park pollution", 6 May 1998.

AFP, "EU experts warn pollution spills could occur again", 17 March 2000.

AFP, "Hungary says river pollution ‘desperate’ after latest spill", 16 March 2000.

Associated Press Newswires, "Australian company blamed for cyanide spill regrets accident", 17 March 2000.

E. Balazs, "Floods revive poisoned river way" *Budapest Sun Online*, 4 May 2000.

BBC Monitoring, "Deputy mayor criticizes controversial mine – person on hunger strike", 9 August 2000.

BBC Monitoring, "Romania compiles list of 40 potential sources of Hungarian river pollution", 5 July 2000.

BBC Monitoring, "Regional environmental plan not signed by Romania", 5 April 2000.

BBC Monitoring, "Hungarian meeting discusses responsibility for trans-boundary environmental pollution", 24 March 2000.

BBC Monitoring, "Romanian pollution a war against Hungarian "living-space" - far-right leader", 21 March 2000.

BBC Monitoring, "Environmental official says cyanide spill killed 38 fish species", 16 March 2000.

BBC Monitoring, "Minister - Pollution dispute not political tension with Romania", 15 March 2000.

BBC Monitoring, "Visiting Romanian minister regrets recent pollution incidents", 15 March 2000.

BBC Monitoring, "Australian envoy promises help for cyanide-stricken region", 14 March 2000.

BBC Monitoring, "EU commissioner says Romania's EU accession talks unaffected by cyanide spill", 21 February 2000.

BBC News, "New toxic spill hits Eastern Europe", 10 March, 2000.

F. Brigland, "Nothing is alive. Zero", *Sunday Herald*, 20 February 2000.

Budapest Sun Online, "Hungary set to launch cyanide lawsuit", Vol. 8, n° 44, November 2000.

Central Europe Online, "Cyanide spill among worst river pollution says UN", 19 February 2000.

M. Cernea, "The Truth about the Resettlement of the Apuseni Mountains", *Formula As*, n° 582, September 2003.

D. Clifford, "Rosia Montana -- Romania's super pit?", *Mining Magazine*, 1 November 1999.

Courrier international, "Le cyanure du Danube: un poison politique", n° 484, 15 February 2000.

- R. Dascalu, "Romania upbeat after EU environment scrutiny", *Reuters News*, 14 July 2000.
- J. Dempsey, "Romania defends record on corruption", *International Herald Tribune*, 21 July 2008.
- P. Driessen, "Keeping Romania impoverished. Anti mining campaigns will perpetuate unemployment and environmental degradation", 30 August 2007, in *Center for the Defense of Free Enterprise*, <www.cdfef.org>, accessed 24 July 2008.
- M. Durianova, "Gold issue returns to Kremnica. A chance to revive the exposure of environmental risks?", *Slovak Spectator*, 19 December 2005.
- E. Economy, "The lessons of Harbin", *Time*, 27 November 2005.
- Enterprise Europe*, "How can mining and quarrying in the EU be made safer, cleaner, and yet more competitive?", n°1, September 2000, pp. 18-19.
- Environment News Service*, "Europe defines who should pay for eco-damages", 11 February 2000.
- Y. Eudes, "Californie: la nouvelle ruée vers l'or", *Le Monde*, 12 September 2008.
- European Report*, "Danube-Baia Mare task force says the rules must be tightened up", 20 December 2000.
- K. Fenyo, "Hungary struggles to control constantly worsening floods", *Green Horizon*, Vol. 10, n° 2, July 2001.
- B. Fincziczki, "New toxic spills from Romania hit Tisza", *Budapest Business Journal*, 20 March 2000.
- B. Fincziczki, "Deep trouble", *Budapest Business Journal*, April 2000.
- J. Fund, "Make your own mind. An impoverished town strikes gold", *The Wall Street Journal*, 21 August 2007.
- Greenpeace Austria, "Baia Mare: 5th anniversary of the Cyanide Disaster", *Press release*, 2005.
- Greenwire*, "Design flaws, bad weather blamed for spill", 21 April 2000.
- A. Hoffman, "Fighting fire with fire", *Mining reporter*, 20 November 2006.
- Interfax*, "Central European Initiative Summit calls for EU enlargement", 27 June 2000.

Interfax, "Romania willing to cooperate in easing the effects of cyanide pollution", 24 March 2000.

IPR Strategic Information Database, "Hungary raises Tisza pollution in Brussels talks", 23 March, 2000.

P. Kelbie, "UK's last gold mine set to reopen", *The Observer*, 29 June 2008.

C. Kendall, "A new law of nature", *The Guardian*, 24 September 2008.

F. Kerssenbrock, "Fluch des Goldes", *Profil*, 15 November 2004.

T. Kiss, "Hungarian-Romanian relations poisoned", *Budapest Sun Online*, 16 March 2000.

T. Kiss, "Fishermen's blues", *Budapest Sun Online*, 9 March 2000.

G. Kosztolányi, "Aquatic Chernobyl, Requiem for the Tisza and the Szamos: Part One", *Central European Review*, Vol. 2, n° 7, 21 February 2000.

D. Langenkamp, "Signs of life on Tisza and Danube", *Christian Science Monitor*, 8 March 2000.

K. Leech, "If the gold mine doesn't happen, our village will die" *Spiked*, 2 October 2006.
Lloyd's information Casualty Report, "Pollution-rivers Danube, Tisza and Somes, Hungary and Romania", 12 July 2000.

H. McDonald, "Vast reserves of gold discovered in Irish hills", *The Guardian*, 2 July 2008.

T. Macalister, "Ethical business: Norway ejects mining giant Rio from its pension portfolio", *The Guardian*, 9 September 2008.

C. Middap, "Troubled waters", *Daily Telegraph*, 19 February 2000.

B. Miller, "Blue Danube sputters back to life as wars and disputes recede", *The Independent*, 28 May 2002.

S. Milloy, "Green hypocrisy's gold standard", *Junk Science*, 20 September 2007, <www.cdfc.org/index.html>, accessed 9 June 2008.

A. Mutler, "We want answers", *Adelaide advertiser*, 19 February 2000.

A. Mutler, "Romania acknowledges spill severity", *Associated Press Writer*, 17 February 2000.

B. O'Neill, "Greens are the enemies of liberty. Environmentalists want to curb our freedom far more than the government's anti-terrorist laws ever will", *The Guardian*, 15 July 2008.

A. Purvis, M. Radu, J. Stojaspal, "Triangle of Death Three factories pollute a Romanian town, stunting the health and lives of its children", *TIME Atlantic*, 9 April 2000.

REC, "REC urges strong actions to prevent repeat of Tisza river cyanide disaster", press release, 7 March 2000.

Reuters News, "Bulgarian minister must decide on gold-mine court", 26 April 2007.

Reuters News, "Hungary Prime Minister asks Romania not to open gold mine", 20 December 2004.

Reuters News, "Romania says no new risk of river pollution", 13 April 2000.

Reuters News, "Romania to ask for EU money to close danger mines", 20 Mars 2000.

Reuters News, "Romania admits responsibility for cyanide spill", 16 February 2000.

M. Roddy, "Poison spill wrecks Central Europe", *The Times of India*, 22 February 2000.

Rompres, "Greenpeace expands activity in Romania", 25 June 2001.

Rompres, "SC Rosia Montana GoldCorporation odes not submit exploitation project to environmental authorities", 7 August 2000.

A. R. Savulescu, "Mine Waste Risk for European Rivers Still High", *Environment News Service*, 6 April 2000.

H. Schuster, "Greenpeace hits the road in Central and Eastern Europe", *Danube Watch*, n° 1, 2003.

L. Sevier, "The Gold Standard", *The Ecologist*, 17 April 2008.

A.W.M.G Souren, "Weeping rivers: Cyanide Spills in Romania", *The Chemical News*, July 2000, n° 104, pp.14-18.

E. Szamado, "Hungary, hit a third time by pollution from Romania, demands urgent action", *AFP*, 15 March 2000.

S. Stec, "Principles on governance would rein in global corporations. Lessons learned from the Baia Mare spill were shared with the delegates in South Africa", *The Bulletin*, Vol. 11, n° 3, December 2002, pp. 12-13.

J. Terzieff, "Romania counts the cost of cyanide river disaster", *The Sunday Times*, 20 February 2000.

K. Than, "Hungary criticises Romania in latest pollution case", *Reuters News*, 11 March 2000.

The Bulletin, "Death of a river", Vol. 9, n° 2, April 2000, p. 20.

The Bulletin, "EU disaster law", Vol. 9, n° 2, April 2000, pp. 20-21.

The Bulletin, "REC Grants", Vol. 9, n° 2, April 2000, p. 23.

United Nations Information Service, "Tisza River Basin a European Model for Ministerial action", UNIS/INF/244, 11 October 2007.

OFFICIAL REPORTS

Balkan Vital Graphics, "Environment without borders", ENVSEC, 2007.

A. Bernstorff, J. Kanthak, "The real face of the kangaroo. A fact-finding tour", Greenpeace, The Netherlands, March 2000.

K. Burnod-Requia, "Rapid Assessment of the Tisza river basin", UNEP/ROE and UNEP/DEWA/GRID-Europe, UNEP 2004.

Communication from the Commission, COM(2000) 664 final, Brussels, 2000.

P. Csagoly, "The cyanide spill at Baia Mare. Before, during and after", *Summary of the UNEP/OCHA Report*, REC, June 2000.

Declaration of the High-Level Panel of the Sub-regional Conference on "Reducing Environment and Security Risks from Mining in South Eastern Europe and the Tisza River Basin", Cluj-Napoca, 13 May 2005, <www.envsec.org/see/docs/Cluj%20Declaration.doc>, accessed 6 June 2008.

ENVSEC, "Reducing environment and security risks from mining in South Eastern and the Tisza River Basin", sub-regional conference, Cluj-Napoca, Romania, 11-13 May 2005.

European Commission, "Safe operation of mining activities: a follow-up to recent mining accidents", Communication from the Commission, COM(2000) 664 final, Brussels, 23 November 2000.

2000.

European Commission, "Promoting sustainable development in the EU non-energy extractive industry" COM(2000) 265 final, 3 May 2000.

J. Feiler, C. Stark, "Mining after Johannesburg. An assessment of post World Summit on Sustainable Development Political Options", *Mineral Policy Center*, Discussion paper, September 2002.

FFEM, "Transboundary river basin management of the Körös/Crisuri river project, Hungary-Romania. Pilot project including tool set-up for the shared control and management of the river basin", no date.

Tom Garvey, "Lessons from Baia Mare for Foreign Direct Investment", presentation given at the OECD Global Forum on International Investment "Conference on Foreign Direct Investment and the Environment. Lessons to be learned from the mining sector", 7-8 February 2002, Paris.

Greenpeace International, "Corporate crimes. The need for an international instrument on corporate accountability and liability", June 2002.

ICPDR, "Joint Danube Survey: investigation of the Tisza river and its tributaries", Final report, prepared by the Institute for Water Pollution Control, VITUKI, May 2002.

ICPDR, "Inventory of potential accidental risks spots in the Danube river basin", *Expert panel*, November 2001.

ICPDR, "Analysis of the Tisza River Basin. Initial step toward the Tisza River Basin Management", ICPDR, 2008.

International Task Force for Assessing the Baia Mare Accident, "Report of the International Task Force for Assessing the Baia Mare Accident", December 2000.

ICPDR, Zinke Environmental Consulting, "Regional inventory of potential accidental risk spots of Romania, Hungary, Ukraine & Slovakia", August 2000.

R. Moran, "Cyanide uncertainties. Observations on the chemistry, toxicity and analysis of cyanide in mining-related waters", *Mineral Policy Center*, Issue paper n° 1, 1998.

E. O'Hara, "Information report on Rosia Montana", Council of Europe, Parliamentary Assembly, Committee on Culture, Sciences and Education, 21 December 2004.

P. Peck, "Mining for closure. Policies and guidelines for sustainable mining practices and closure of mines", ENVSEC, 2005.

M. Prommer, K. Skwarek, "Report on the economic and social impacts of the cyanide spill and heavy metal pollution in the river Tisza region", Center for Environmental Study, Budapest, May 2001 www.ktk-ces.hu/4153a.html, accessed 26 July 2008.

REC, "International law and the Baia Mare Cyanide spill", *Final report*, September 2003.

V.M. Sol, S.W.M. Peters, H. Aiking, "Toxic waste storages sites in EU countries. A preliminary inventory", *IVM Report*, n° R-99/D4, Institute for Environmental Studies, Amsterdam University, February 1999.

S. Stec, A. Antypas, T. Jansen, E. Gulacsy, "International law and the Baia Mare cyanide spill. Final Report", REC, with the support of the Government of the United Kingdom, September 2001.

UNEP, "APELL for Mining, Guidance for the Mining Industry in Raising Awareness and Preparedness for Emergencies at Local Level", <www.unep.fr/scp/publications/details.asp?id=WEB/0058/PA>, accessed 27 September 2008.

UNEP/ICME, "Report. Workshop on industry codes of practices: cyanide management", Ecoles des Mines, France, 25-26 May 2000.

UNEP/OCHA Assessment Mission, "Spill of liquid and suspended waste at the Aurul S.A. retreatment plant in Baia Mare", Romania, Hungary, Federal Republic of Yugoslavia, 23 February - 6 March 2000, Final Report, Geneva, March 2000.

War on Want, "Fanning the Flames. The role of British mining companies in conflict and the violation of human rights", November 2007, <www.waronwant.org/?lid=15142>, accessed on 27 September 2007.