In Commemoration of the Boac Spill Marinduque, Philippines, March 24, 1996

- Boac River Spill, March 24, 1996
- Calancan Bay Tailings Dumping, 1975-1991
- Mogpog River Spill, December 6, 1993

On March 24, 1996, a badly-sealed drainage tunnel at the base of a mined-out pit containing mine tailings burst. The Tapian Pit, high in the central mountains of Marinduque, had been used as a storage dump for tailings from the new and adjacent San Antonio copper-gold mine since 1992. Some 3-4 million tonnes of metal-loaded and acid-generating tailings spewed into the 26-kilometre-long Boac River on the small Philippine island of Marinduque, filling the river with tailings from the mountains to the sea.



From a PowerPoint by Myke Magalang of Marinduque Council for Environmental Concerns



Boac River tailings spill disaster, 1996

Five villages and some 4,400 villagers were immediately cut off by the mine waste and had to be serviced and evacuated by helicopter. In the village of Hinapula the waste was as high as 6 feet and 400 families had to flee to higher ground. Twenty villages along the river were immediately affected. Rice fields and other food crops were destroyed. The river - which had been a means of transportation, a source of water for irrigation and for watering animals, as well as a rich source of food and livelihood for thousands of villagers - was rendered useless. Coral reefs and marine species at the mouth of the river were also impacted by the turbidity and metals introduced by the tailings.

An investigative team from the United Nations visited the island shortly after the tailings spill to investigate the Marcopper Mining Corporation (Marcopper) disaster and noted: "The unconventional use of the Tapian Pit as a containment system for tailings, particularly because of the presence of a disused drainage tunnel near its bottom,

should have been sufficient to ensure that risk assessment and contingency planning were carried out" and concluded, "it is evident that environmental management was not a high priority for Marcopper."

Canada's Placer Dome Inc. co-owned and managed the two Marcopper mines on the island. All presidents and resident managers of Marcopper were seconded from Placer Dome. While the company blames an earthquake for the tunnel's failure, there is no evidence there was an earthquake in Marinduque on that day. In fact, the tunnel had been leaking for months and actually failed as Marcopper engineers were drilling down on the tunnel to try to fix its failing cement plug.

Placer Dome's plan for cleaning up the river was to dump the tailings into the sea at Tablas Strait using a submerged pipe. This plan was rejected by Philippine authorities. After a leaked report that Placer Dome had commissioned by Klohn Crippen indicated the likelihood of further failure of waste containment structures at the mine site, Placer Dome left the Philippines in 2001. In 2006 Canada's Barrick Gold bought out Placer Dome.

Acid-generating and metal-leaching tailings remain in disintegrating rice bags piled along the river banks. The Boac River has never been remediated.

A criminal suit against then-Marcopper executives, President and Chief Executive Officer, John Loney, and Senior Manager, Steven Reid, remains pending.



Boac River. Oxfam Australia, 2011



Calancan Bay Tailings Dumping, 1975-1991

The Boac River catastrophe was the third disaster suffered by the people of Marinduque and finally shut down mining by the Marcopper Mining Corporation after almost 30 years of operations (1969-1996). The Tapian Pit, mined from 1969-1991, was also the source of waste for the first mine tailings tragedy on Marinduque.





Oxfam Australia, 2011

Tailings from the Tapian Pit were deposited nearby. When another copper-gold deposit was discovered under the tailings dump, the tailings were dredged and, together with tailings produced by ongoing processing of Tapian Pit ore, were piped down the mountains to the sea at Calancan Bay.



Tapian Pit. Catherine Coumans, 1989



San Antonio Tailings Pond. Catherine Coumans, 1989

Tailings from processing of copper-gold ore from the Tapian Pit spewed into the wide and shallow Calancan Bay day and night from 1975-1991.

Over time some 200 million tons of tailings covered two major coral reefs and seagrasses over 80 square kilometres of the bottom of Calancan Bay. The tailings formed a causeway that eventually reached some 5 miles out into the sea.



Tailings from Tapian Pit entering Calancan Bay. Catherine Coumans, 1988

For the 16 years of dumping, and many years after that, the tailings were exposed and would regularly be stirred up by ocean breezes and blow into nearby Calancan Bay villages where they entered homes, covered rice fields and blew into open wells. Villagers called the tailings their "snow from Canada."



Calancan Bay tailings causeway. Catherine Coumans, 1988

Calancan Bay villagers were never asked for their permission for the dumping. They suffered immediate losses as various species of fish avoided the turbulence caused by the dumping. As seagrasses and major coral reefs were covered food security and livelihood was severely affected. Once relatively easy and safe sources of food and income in the protected bay were no longer available, fishermen and women had to put outboard motors on their small boats and enter deeper and more dangerous waters outside of the bay.

Calancan Bay villagers protested the dumping vehemently for 16 years and continue to demand that they be compensated for their losses and that the bay be rehabilitated. Two law suits against the dumping were filed and won, only to be overturned by the Office of the President (Ferdinand Marcos and later Corazon Aguino).

When the second legal victory was overturned, in 1988, the company was required to hire local fishermen to spread topsoil on the tailings to try to grow vegetation and mitigate the blowing of the tailings into villages.



Fishermen try to spread top soil on the Calancan Bay tailings causeway. Catherine Coumans, 1988



Fishermen try to spread top soil on the Calancan Bay tailings causeway. Catherine Coumans, 1988

The Calancan Bay tailings leach metals and are suspected to be the cause of lead contamination found in children from villages around the bay. In 1997 a joint team of medical professionals from the Philippine Department of Health and the University of the Philippines (DoH-UP) conducted limited health studies amongst 108 Calancan Bay villagers and established unacceptable lead and mercury levels in seven of the 22 children tested. Then-Health Secretary Carmencita Reodica said, "In the long run, if we continue to monitor, we will find more and more cases." She also warned Calancan Bay villagers "to exercise extreme caution" in eating oysters and fish from the bay. An expanded follow-up study was conducted by the DoH-UP team in October 1997. This time air and soil samples as well as blood samples were collected, at locations on the causeway and seven kilometres away. This time, all 59 children tested had unacceptable levels of lead in their blood. Soil samples showed unacceptable levels of lead and cadmium, and elevated levels of copper and zinc, while air samples showed lead values exceeding United States Environmental Protection Agency standards. Based on these findings, seven government agencies petitioned the Office of the President to declare a state of disaster in Calancan Bay for health reasons. President Fidel Ramos declared a State of Calamity for health reasons in 1998 for three Calancan Bay villages because of lead contamination. Children from the area underwent chelation therapy in Manila.



Women from Barangay (Village of) Botilao on Calancan Bay

Mothers from Calancan Bay villages have been in the forefront of the struggle to stop the dumping, seek compensation for the losses their families have suffered, and to have the bay rehabilitated.

To date, the bay has not been rehabilitated and the families of Calancan Bay have never received compensation for their losses.



Calancan Bay tailings causeway. Catherine Coumans, MiningWatch Canada, 2001



Calancan Bay tailings causeway. Catherine Coumans, MiningWatch Canada, 2016

Mogpog River Disaster, December 6, 1993

When the second Marcopper mine, San Antonio, started operations in 1992, Placer Dome intended to continue dumping the tailings from the new pit into Calancan Bay. However, protest against this plan was so strong that permission was sought to use the nearby mined out Tapian Pit as a waste dump for San Antonio's tailings instead, with disastrous results for the Boac River in 1996.

In order to keep siltation from overburden and waste rock, associated with the construction of the new San Antonio Pit, out of the Mogpog River an earthen siltation dam was built in Maguila-guila creek 1991.

However, in the night of December 6, 1993, the Maguila-guila Siltation Dam burst with disastrous effect. Waste contained behind the dam flooded down the Mogpog River washing away homes in the mountains, flooding rice fields, killing livestock, and filling homes in the low-land town of Mogpog with waste and silt several feet high.

Two young children were buried in the mine waste and died. They were Christina Tagle, age 3, and Josephine Tagle, age 6.

The Maguila-guila Dam was rebuilt, with an overflow this time, but the waste was soon so high behind the dam that it flowed freely through the overflow.



Waste behind the Maguila-guila siltation dam entering the overflow. Catherine Coumans, MiningWatch Canada, 2001



Waste behind the Maguila-guila siltation dam running through the overflow. Catherine Coumans, MiningWatch Canada, 2001

Three years after the 1993 Mogpog River disaster, the 1996 Boac River disaster occurred and the San Antonio mine ceased operations. The earthen Maguila-guila Dam has not been maintained since 1996 and has steadily deteriorated. The Mogpog River is continuously heavily contaminated by runoff from tons of overburden and waste rock at the abandoned mine site and is biologically dead.

The effluent that flows through the dam's tunnel has the bright orange colour of acid mine drainage.



Acid mine drainage flows through the Maguila-guila Dam tunnel and enters the Mogpog River. Catherine Coumans, MiningWatch Canada, 2016

In 2005 a lawsuit was launched against Placer Dome for rehabilitation of the Boac River, Mogpog River and Calancan Bay and for compensation for Marinduquenos who had relied on these ecosystems for food security and their livelihoods. In 2006, when Barrick Gold acquired Placer Dome, it was added to the suit. In 2013, Barrick Gold sought to settle the law suit by offering the Province of Marinduque roughly \$12 million US (after legal fees).

In addition to being wholly inadequate to remediate the Boac River, Mogpog River and Calancan Bay, the settlement offer came with onerous conditions, including that the funds could not be used to rehabilitate mining impacted areas.

Marinduqueños repeatedly came out in force to demand that their leaders turn down this inadequate offer.



Marinduqueños protest Barrick Gold's settlement offer. Marinduque Council for Environmental Concerns, 2014



Elizabeth Manggol, Executive Director of the Marinduque Council for Environmental Concerns, 2013

Elizabeth Manggol of the Marinduque Council for Environmental Concerns said that the proposed settlement should be rejected, "not only because the amount was too small, but because of certain conditions absolving the company of environmental damages." "Among those conditions is that the settlement proceeds can never be used for the repair and rehabilitation [of the damaged rivers and mining structures] when it was the purpose [of the lawsuit] in the first place." (Inquirer Southern Luzon, 2013).

Barrick Gold's settlement offer was rejected and the people of Marinduque and their elected officials continue to seek justice to ensure the rehabilitation of the downstream environments in Boac, Mogpog and Calancan Bay, as well as final remediation and closure of the mine site, and compensation for the health impacts and loss of food security and livelihood of the impacted communities.

For more information contact: Catherine Coumans, catherine@miningwatch.ca