COUNCIL ON ETHICS
THE GOVERNMENT PENSION FUND GLOBAL

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Observation report on PT Semen Indonesia (Persero) Tbk

On 25 May 2023, Norges Bank placed PT Semen Indonesia (Persero) Tbk (also known as Semen Indonesia Group or SIG) under observation at the recommendation of the Council on Ethics. The company was placed under observation due to the risk that the company's activities may harm irreplaceable prehistoric cultural heritage sites. The Council issued its recommendation on 19 December 2022.

SIG is Indonesia's largest producer of cement. Through its subsidiary, PT Semen Tonasa, the company operates a limestone quarry, a clay pit and four cement factories in the Maros-Pangkep area of South Sulawesi, Indonesia. Some of the oldest rock art in the world is to be found inside the area's limestone caves. This art is considered to be hugely significant for our understanding of the symbolic behaviour of early modern humans. The Council's observation of the company is primarily intended to assess how it is implementing measures to reduce the risk of damaging these cultural heritage sites.

Over the past year, the Council has communicated regularly with SIG. The company has provided information about the measures it has implemented to protect the rock art and has commented on a draft observation report. With the help of consultants, the Council has assessed improvements and progress. The consultants visited Semen Tonasa in October 2023 and held meetings with the companies, local authorities and other interested parties. The Council has shared the consultants' report with SIG and Semen Tonasa. Among other things, the report offers specific advice and recommendations to the companies.

The Council's recommendation to place SIG under observation

Semen Tonasa's production facilities in Pangkep are located in the village of Biringe, 55 km north of Makassar. The company has five mining concessions in the Pangkep district, two of which are in active operation. Semen Tonasa plans to develop a new concession area in the same district.

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Around 40 archaeological sites have been discovered inside or adjacent to Semen Tonasa's concession areas. Of these, 18 contain prehistoric rock art. In one of the sites, Bulu Sipong 4, the world's oldest figurative cave painting, a hunting scene dated to be at least 43,900 years old, may be found.

The study that the Council commissioned showed that the rock art had deteriorated and that there was a risk that Semen Tonasa's operations could damage the rock art located in or near to its production facilities.[1] Semen Tonasa did not engage in any systematic monitoring of the rock art that could enable it to assess the risk that its operations were impacting the images and the measures that should be implemented to protect them.

The Council considered that SIG was obliged to shoulder a particular responsibility to ensure that Semen Tonasa's operations are not harming the rock art, given its outstanding global significance.

The company gave notice that it would take several steps to protect the cultural heritage, including better monitoring, and that it would draw up a Cultural Heritage Management Plan (CHMP) for its production sites. Since many of the measures indicated were still in the planning stage, the Council recommended that SIG be placed under observation to monitor their implementation.

Implementation of measures to protect cultural heritage sites

Cultural Heritage Management Plan (CHMP)

SIG and Semen Tonasa have engaged experts, South Sulawesi Province Cultural Heritage Centre, Universitas Hasanuddin and other stakeholders in the development of a CHMP. The plan has not yet been finalised.

A draft version of the plan, which was reviewed by the Council's consultants in October 2023, lacked detailed and measurable management procedures, as well as step-by-step initiatives and timelines for the plan's implementation.

During the work on the CHMP, a survey of Semen Tonasa's concession areas undertaken in May–July resulted in the discovery of 10 new archaeological sites in the Pangkep region (see the image below). Some of these are located in or near Semen Tonasa's concession areas. One of the sites in particular, Leang Jota 1, borders an area in which blasting takes place. The rock art in this cave is depicted in 14 panels. The walls are covered in moss, algae and dust, which may be attributed partly to its proximity to the blasting area. Areas containing aspects of the intangible cultural heritage, such as ritually and culturally important sites, were also surveyed.

SIG has disclosed that the CHMP will contain so-called "chance find procedures", but that these procedures have not yet been fully developed. Chance find procedures are intended to ensure that any previously unknown cultural heritage sites which are identified in the course of the company's activities are appropriately managed and protected.

1 Whincop, M. and Tan, N. H. 2022a. Archaeological Risk Assessment of Semen Tonasa's Operations at Maros Pangkep, Sulawesi, Indonesia. 20 May 2022. A report to Council on Ethics for the Norwegian Government Pension Fund Global.

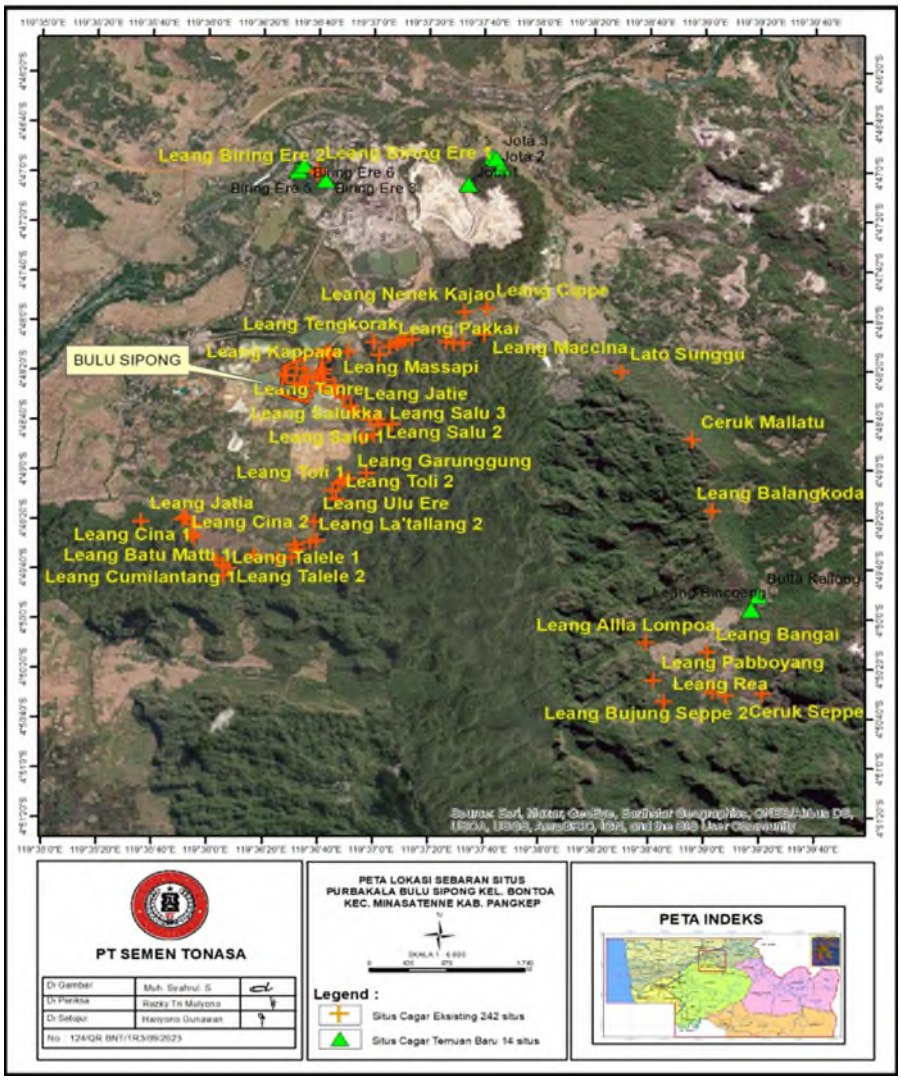

Fig. 1.1 New archaeological sites discovered in 2023 (marked with green triangles)

Monitoring of cultural heritage sites

An extensive monitoring programme has been proposed but not yet put in place. The most serious risks of damage to the rock art have therefore still not been evaluated.

A new study indicates that sulphur emissions could be an important contributory factor in the deterioration of the rock art. This could potentially be of greater significance than changes in the climate.[2] Emission sources include the historic burning of fires inside the caves, farming methods such as the burning of rice fields, exhaust from diesel vehicles and the construction of cement-related infrastructure. This new research underlines the need to understand and mitigate the complex threats to which the rock art is subject, and should form the basis for the future inclusion in the CHMP of strategies that specifically address how sulphur-related impacts can be mitigated.

[2] Gagan, M. K., Halide, H., Permana, R. C. E., Lebe, R., Dunbar, G. B., Kimbrough, A. K., Scott-Gagan, H., Zwartz, D. and Hantoro, W. S. 2022. The historical impact of anthropogenic air-borne sulphur on the Pleistocene rock art of Sulawesi. *Scientific Reports, 12*, 21512. (doi:https://doi.org/10.1038/s41598-022-25810-1)

Semen Tonasa is planning to establish a metering station for dust, sulphur, vibrations, climate and humidity at Bulu Sipong 4, which should be in place at the start of 2024. Dust-measurement stations have been established around Bulu Sipong Hill.

Measures to reduce dust levels

Semen Tonasa has implemented several initiatives to reduce exposure to dust. For example, the road near Bulu Sipong has been paved, trees have been planted to filter out the dust, and the unpaved roadways inside the quarry are watered more frequently.

Measures to reduce vibrations
The company has established a 430-metre buffer zone around the cultural heritage sites, where no resource extraction is to take place. Measurements that Semen Tonasa have carried out show that blasting now takes place more than 2,600 metres from Bulu Sipong.

Measures to reduce humidity
These measures include draining a water reservoir near Bulu Simpong and attempts to plant mangroves. The long-term impact of these measures is not clear.

Fencing
The fencing off of the cultural heritage sites has been improved to prevent unauthorised entry by people and animals (cattle graze in all Semen Tonasa's concession areas).

SIG's response to the draft observation report

After receiving the Council's recommendation to place it under observation, SIG formed a working group, comprising members from Semen Tonasa and SIG, to map risks, reduce potential risks and document the measures implemented to protect the cultural heritage.

SIG has stated that managing the cultural heritage sites is important to it. The company has expressed the same expectation with respect to Semen Tonasa and has made Semen Tonasa's board accountable for performance in this area.

According to SIG, the Cultural Heritage Management Plan is "*the first to be developed for a company in Indonesia, we consider it as a living document which needs to be periodically enhanced and updated. In line with the recommendation outlined, to be operational and tactical in terms of actions we will supplement it with specific guideline and procedure, including chance find and monitoring regime." Furthermore, "Implementation plan of CHMP including detailed timeline will be included in the management system which will be reported and monitored by PTST management and SIG board."*

The company also stated that when measuring equipment is in place, the monitoring will have a long-term perspective that presumes the training of personnel. SIG is keen for the monitoring programme to succeed, not only to protect the rock art but also because it will furnish data on the efficacy of emission-reduction measures in cement production. According to SIG, Semen Tonasa has expanded its partnership with South Sulawesi Province Cultural Heritage Centre (BPK), including with respect to monitoring activities.

SIG confirmed that: "*Our commitment remains in ensuring that Semen Tonasa mitigate risks to the rock art by implementing the recommended measures and monitoring activities impact*

in systematic ways. Moving forward, our goal is to establish a more coordinated, comprehensive, and clear approach for preservation of cultural heritage sites."

The Council's assessment

It appears to the Council that SIG and Semen Tonasa have taken steps in the right direction to reduce the risk of damage to the cultural heritage sites, even though several important initiatives remain outstanding.

The Council notes that work on the Cultural Heritage Management Plan (CHMP) has not been concluded. Based on the assessment of the Council's consultants, the plan should contain a clearer allocation of roles and responsibilities for cultural heritage between the various stakeholders, as well as operational guidelines, chance find procedures, a detailed plan and timelines for the implementation of the measures, and an extensive monitoring regime. It is positive that field studies were conducted in connection with the CHMP's development, which resulted in the discovery of a further 10 archaeological sites.

Measures to reduce dust levels have been implemented and measures to reduce humidity are being tested, including the planting of mangrove trees. Mangroves do not occur naturally in this region and the question of whether the introduction of a non-native species will have any adverse impact on local biodiversity should be assessed.

The Council notes that a monitoring programme is under development but not yet implemented. This means that important risks to the rock art remain unidentified.

SIG has taken positive steps to make Semen Tonasa's board accountable for the management of the cultural heritage sites. The Council presumes that the board will demand regular progress reports and evaluate what the company is doing to manage and protect these sites.

The Council concludes that although SIG and Semen Tonasa have shown a willingness to protect the cultural heritage sites, the companies still have a way to go with respect to identifying risks and developing and implementing a CHMP to ensure that the cultural heritage sites are preserved. The Council will continue its observation of SIG in order to follow up the company's efforts going forward and evaluate the results achieved.

*

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