

Update note on Tailings Committee activities.

This note is an update on activities of the SAIMM Tailings Group and the GMPA Global Action Group on Tailings.

Before illustrating progress on these groups, it is important to indicate that the Global Tailings Review conducted by the ICMM has resulted in the development of the Global Industry Standard on Tailings Management, which is now finalized and published as a Best Practice Guideline. Although not mandatory for ICMM member companies, it provides a valuable framework which can also be used by non-ICMM members.

However, the GISTM has come in for some criticism from NGO groups, not least of which is Earthworks, who have concluded that the GISTM does not go far enough in protecting communities and the environment.

A book has also been published “Credibility Crisis: Brumadinho and the politics of Mining Industry reform” (Kemp, Hopkins) which also illustrates that the Standard came to represent a step change, yet also falls short.

A website has been established “Tailings News Alerts” (TNA) which published regular updates and reports on global tailings activity.

These illustrate the elevation to a significantly higher level of attention to tailings storage facilities worldwide, and is increasing the focus of investors on how mining companies are dealing with and managing their facilities.

GMPA Global Action on Tailings work group, 17th June 2021.

The meeting opened with a discussion around reports on the TNA website, where it was noted how high the bar is being lifted. The discussion also covered the Book referred to above, which questions how mining companies manage the risks of tailings dam failures, and recommends that even if the probability of failure is low, the matter of possible failure should be raised to Board level, because even if the probability is low, the impact will usually be very high.

The Book further recommends that industry must be even more transparent in the way in which it manages TSFs and the risks of possible failures to all stakeholders. This will ensure that trust is not lost.

The GAT group is concentrating its work on four main areas, these being:

- Building trust;
- Workforce planning around Tailings management;
- Content and information sharing; and
- Gap analysis.

Sub- committees have been established for these work groups, and the SAIMM is represented on them.

In terms of Building Trust, the GMPA and GAT provides a platform for information sharing, where topical issues and case studies can be shared. The GAT is also considering how it can further support the ICMM, which is establishing an Independent Tailings Institute. This is being formed with selected consultants and industry input, as well as other stakeholders. A funding model is being developed. The GAT will also support and publish research and development performed by academic institutions, and make a listing of these available.

In the area of workforce planning, this centres around establishing the necessary qualifications and registration of Competent People and/or Engineers of Record, with input from all the GMPA members.

A register is also being kept of all short courses and webinars that cover the topic, with assurance on common language, reliance on the ICMM Standard etc.. SAIMM has participated in the development of the book.

In terms of Content and Information Sharing, access is being provided to key resources through the GMPA Base Camp website, with a list of references. Participating members will also identify how technical information, papers etc., are identified and captured and channeled into a dedicated site within OneMine.

The GAT group and GMPA will also maintain a catalogue and register of all global tailings events and conferences, and coordinate this to ensure there are no clashes, and also ensure reciprocity through digital access.

The Society of Mining Engineers (SME) in the USA are completing their book on Tailings Management with 34 out of 43 chapters complete. Publication date is scheduled for January 2022.

The SAIMM Tailings Working Group.

The SAIMM Tailings Working Group has established three sub-committees which cover the following:

- Competency, qualifications and competency;
- Standards and Guidance; and
- Conference Organising and information sharing.

In the area of Competency, Qualifications and Competency, the work is being guided by the GMPA GAT working group, and the GISTM.

A survey has been developed and circulated, enquiring on industry needs and thus far 60 responses have been received and are being analysed and summarised. The response has been most valuable and positive.

This work will then be shared with Academia, training providers and registration authorities.

The group is also tracking the development of short courses both locally and internationally.

In the area of Standards and Guidance, the aim is to establish whether a local Code within the Samrec/Samval Committee (SSC) should be developed. This Code should be a guidance document primarily, with limited but necessary standards, and should focus on self-assessment.

A vital piece of work that is required in South Africa is to review and update the SANS 10286 Standard on Mine Waste and Residue Deposits. The SAIMM is partnering with the South African Institute of Civil Engineers to spearhead this work, which will include participation of the Minerals Council South Africa, the Departments of Mineral Resources and Energy, Environment and Water Affairs, as well as other interested and affected parties. This work is being guided by the GISTM framework.

A request for funding for this work has been made to industry through the Minerals Council South Africa, and so far there has been favourable response from individual members.

This revision of SANS 10286 will provide guidance on the development of a Code similar in format and principles to SAMREC and SAMVAL. In the meanwhile a draft structure is being developed based on the SSC Codes, and preliminary discussions with the SSC have already begun.

The Conferencing work group is concentrating on the programme for the Global Tailings Standards and Opportunities for the Mine of the Future Conference, scheduled for 15th-18th November 2021. It

has been resolved that as result of the current COVID-19 resurgence that this will be a virtual international event.

To date some 39 papers have been received and accepted, and there are 9 keynote speakers, from industry, academia, NGOs and the ICMM.

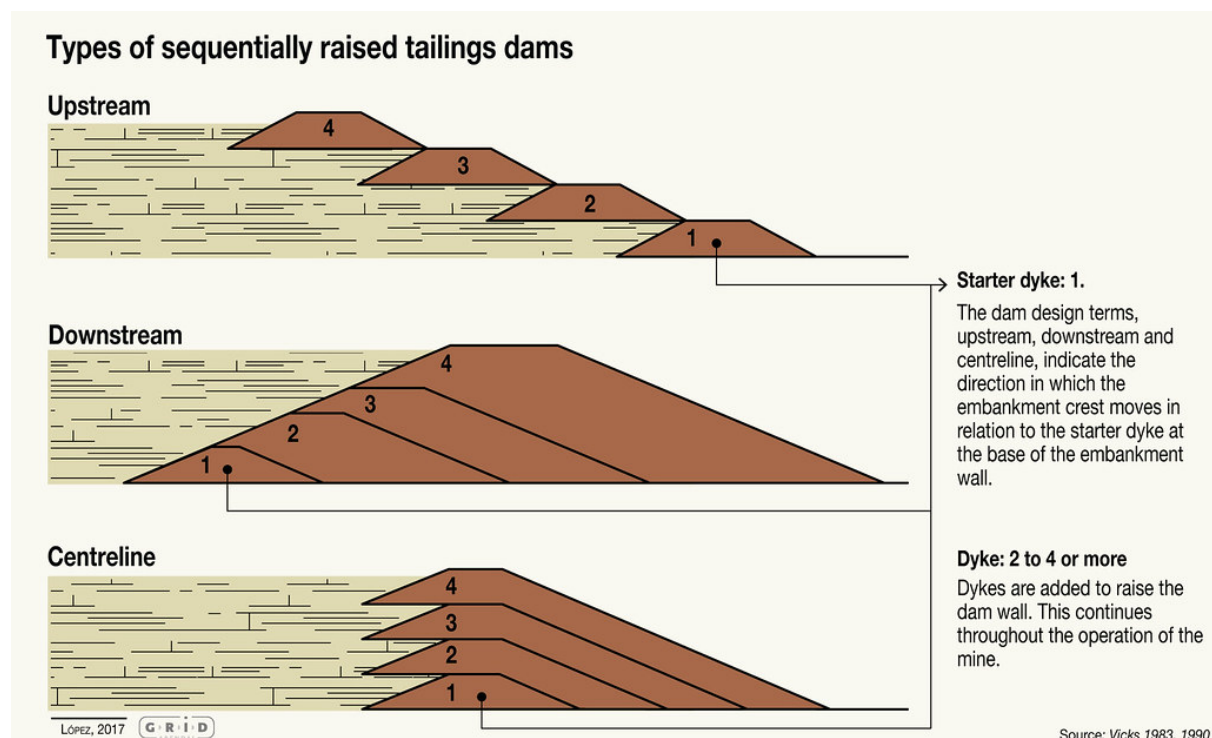
There will also be awards for outstanding contributions to Tailings Design and Management in South Africa.

The conference will follow the GISTM topics and serve to introduce the GISTM.

An emerging issue and debate from the global discussions centres around the design of tailings facilities, as either “upstream” or “downstream” facilities.

This debate concerns the safety of upstream facilities, which are the predominant design in Southern Africa. These have mainly been audited by the mining companies on the request of international investors, and the results have been posted on their websites.

The result of these audits have indicated that these facilities satisfy GISTM standards, but this needs to be verified through a thorough independent study. The SAIMM through the working group wishes to request funding for such a study to be conducted.



Source : Earthworks website.

The SAIMM Tailings Working Group work plan.

The following is an update on the annual work plan.

1. Finalise the Terms of Reference : *Completed.*
2. Identify and engage with affiliated organization: *completed, SAICE.*
3. Establish a competency and qualifications working group to define professional roles, and the requirements in terms of qualifications, capabilities. *Established and working.*

4. Define professional ethics and behaviour in TSF management. *Established as part of Competency and Qualifications group.*
5. Engage with ICMM and ICOLD and translate standards and guidelines into local requirements. *Standards and Guidance group established and working.*
6. Engage with DMRE. *In progress.*
7. Liason with research organisations to ensure collaboration and support. *In progress. A list of potential research projects is being drawn up.*
8. Engage with SAICE on update of SANS 10286 . *In progress.*
9. Participate in development and publication of SME book, representing the interests of Southern Africa. *Completed.*
10. Organise a regional tailings event. *In progress.*
11. Develop a website newsletter. *Completed.*