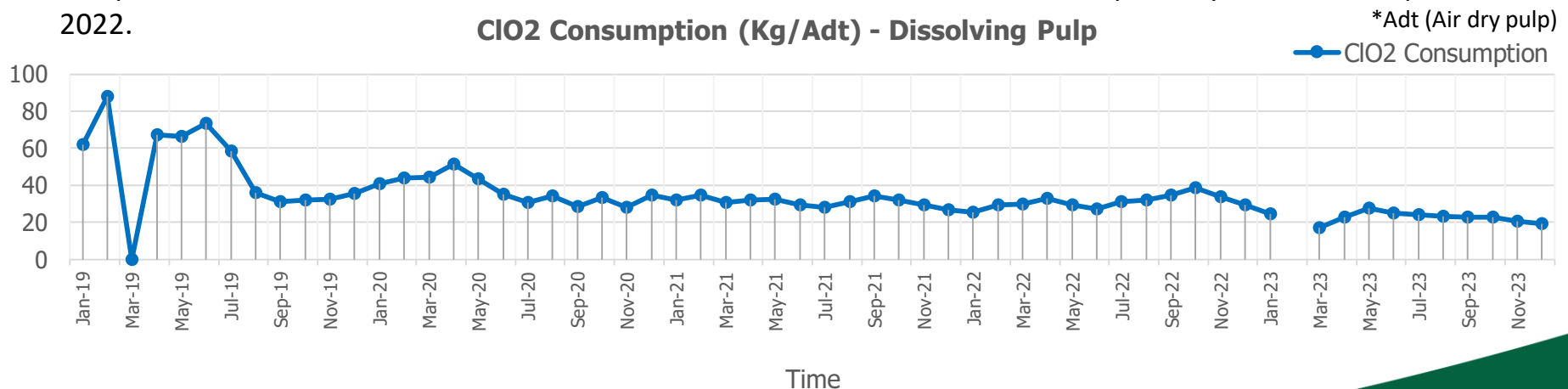


## PT Toba Pulp Lestari's Commitment To Eliminate Chlorine For Bleaching

Chlorine is not used in the process of pulp bleaching. PT TPL only uses  $\text{ClO}_2$  or chlorine dioxide compounds which are far more environment friendly in the process of pulp bleaching. Even though it is safe for the environment, TPL is committed to reducing the usage of chlorine dioxide. This can be seen in the graph shown below on the reduction of chlorine dioxide usage from 2019 to 2021. TPL upgraded the Mill in 2019, and one of the upgrades was installing the Oxygen Delignification Plant, which is a TCF technology used in pulp bleaching by using oxygen gas with 99.99% purity (produced by the newly installed Cryogenic Oxygen Plant in 2019). This upgrade makes a significant contribution to reducing the ECF ( $\text{ClO}_2$ ) bleaching chemical consumption. After optimization, in 2019, the reduction of  $\text{ClO}_2$  consumption was 51.70%. But of course, with the upgrade, the operation team needs to understand and operate the Mill at its best with this new technology. As a result of the operation team spirit, the Mill is being optimized area by area at a time. With this optimization, in 2020, the  $\text{ClO}_2$  consumption was reduced by 26,07 % after the optimization in 2019. In 2021, TPL will be able to further reduce the  $\text{ClO}_2$  consumption by 17,13 % compared to 2020. In 2022,  $\text{ClO}_2$  consumption slightly increased by around 0.48% compared to 2021. In 2023, TPL will be able to further reduce the  $\text{ClO}_2$  consumption by 27,31 % compared to 2022.



\*In March 2019, TPL produce paper grade pulp (Bleach Kraft Pulp)

\*In February 2023, TPL Mill Shut