MonitorPro

Environmental Data Management Systems for the Mining Industry


EHS Data Ltd
January 2021

About the global mining industry

Modern day society is defined by technology which relies heavily on metals such as iron, copper, gold and nickel. These natural commodities are also used in other fields, ranging from electronics to surgical instruments to transport and buildings.

Mined for thousands of years, these metals have vastly impacted the advancement of the human civilisation which has relied heavily on their presence. Coal is still one of the leading global energy resources.

Today, the mining sector is pivotal to the world's economy, with revenue of the top 40 global mining companies which represent a vast majority of the whole industry, amount approx to 692 billion U.S. dollars in 2019.
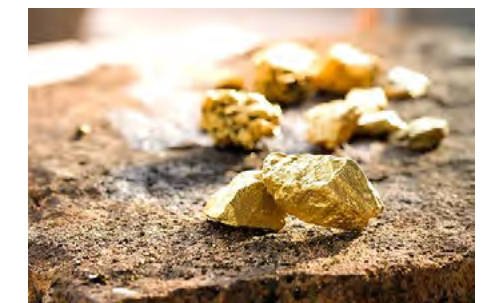
Total Revenue of the top mining companies worldwide

692bn USD*

*https://www.statista.com/topics/1143/mining/#dossierSummary__chapter2

Managing environmental impacts caused by mining

One of the biggest challenges faced by responsible mining companies is environmental protection. Mining activities can drastically alter environments, but remediation and mitigation can restore the environment by reducing impacts, meeting regulatory demands and saving on resources.

Mining organisations seek to manage and minimise these impacts by implementing environmental policies which must adhere to federal legislation. The most obvious form of legislation are environmental permits which are site specific and vary from jurisdiction to jurisdiction, although there are common themes. These permits also require an ongoing environmental monitoring programme with defined set of targets and different measures of variables.

Environmental monitoring and reporting is the process of collecting, managing and analysing the environmental impact caused by the mining operation. For many areas, these environmental impacts consist of air or dust emissions, noise, gases, water usage and discharge to, ground usage and degradation , and many more.

This environmental data come from a range of sources, including loggers, sensors and monitoring carried out by employees, consultants, contractors and analytical laboratories. Furthermore, while there have been many advances in monitoring and logging data, analysis and reporting are often laborious tasks that are carried out in spreadsheets or a rudimentary database.

Permits

The first and most obvious drivers are permits. These impose conditions on an operation which force it to manage its environmental impacts responsibly. There are various regulatory bodies around the world who grant permits that can be something of a minefield to navigate.
But navigated it must be since no permit equates to no operation.

Mine Stage	Significant Environmental Impacts
▶ Exploration	Vegetation clearance; impacts on cultural heritage; ground disturbance, water management (e.g. for drilling); weed management; spills and environmental accidents; loss and damage to topsoil required for eventual rehabilitation.
▶ Construction	Land disturbance and local environment compared to baseline; ground water and surface water; dust; waste management; noise.
▶ Operation	Air Quality (e.g. dust, S02 and other emissions from plant); noise; ground water and surface water impacts; water use, waste rock management and subsequent acid rock damage and erosion; chemical use; environmental incidents (e.g. spills); waste management (identification and segregation of waste streams, recycling)
▶ Close Aftercare	Seepage and toxic effects from waste rock and tailings; rehabilitation of the site.

More Information
ehsdata.com/articles/the-need-for-an-environmental-management-system

Why mining orgnisations invest in dedicated data systems to manage environmental impact

The volume of environmental data across organisations is rapidly increasing, with many companies spending hundreds of thousands of dollars each year to manage their data and adhere to environmental laws and legislation.

The use of specialist data management systems has the potential to help companies to reduce cost, improve environmental performance, strengthen relationships with stakeholders and reduce potential disaster risk. It is important that the systems applied are capable of capturing value from the data.

User-configurable dashboards enable simple and effective data sharing and powerful displays.

Powerful mapping you don't need to be an expert to use. Create areas to display permit boundaries, restoration areas or borefields.

View mining case studies

Click the buttons to read each case study

Benefits of using a dedicated data management system in mining

Boost assurance that your data is in order and correct in case of critique or accident.

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Increase efficiency through automation and accurate data capture.	Improves data quality through validation, security & audit trails.	Adds confidence that authorities receive environmental reports on time and with reliable data.
Foresee performance or occurrences through trend analysis on continuously updated dashboards.	Visualise current situation through advanced analytical tools and up-to-date satellite imagery mapping.	Reduce compliance risks through planning, compliance checks, calculations, alerts & scheduled reporting tools.

Environmental monitoring covers many different media types, from air quality to dust, noise, surface and groundwater. These often need to be combined with data from further sources such as production or weather data. It's all on different frequencies with differing formats, sources and compliance limits.
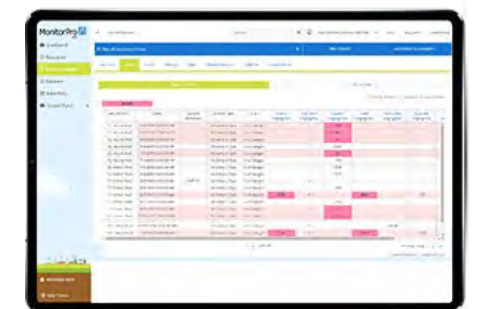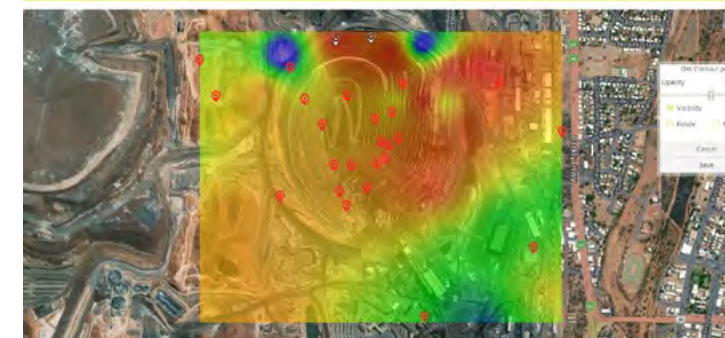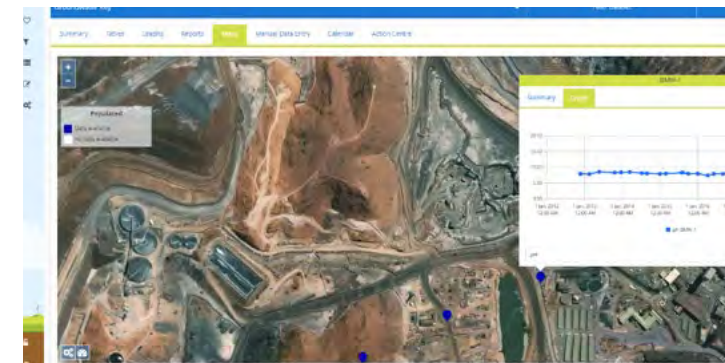
The role of MonitorPro in mining organisations

Seamlessly Import or Email Data Directly to MonitorPro from the Field

Powerful Satellite Imagery Technologies inc.Google & Sentinel Mapping

Check historical vegetation events for one site.

Areas of **MonitorPro** expertise include:

- Compliance and regulations
- Validation of data
- Visuals and dashboards
- Highly configurable
- Scheduling
- Import email data directly into MonitorPro
- Powerful satellite imagery - Google & Sentinel
- Show the different layer styles
- Key account management

mCERTS
THE ENVIRONMENT AGENCY'S
MONITORING CERTIFICATION SCHEME

Microsoft Partner | Silver Application Developn

Using environmental intelligence to drive business performance

MonitorPro is a world-class environmental database management system dedicated to streamline environmental monitoring and reporting.

Developed by EHS Data, **MonitorPro** has been used by major mining companies since 1998. During that time, continuous development using the latest technology, coupled with unparalleled customer support, has created an industry leading solution for environmental professionals.

MonitorPro is trusted by organisations spanning five continents, with locations in: Australia, North America, Canada, South America, Europe, Asia and Africa. With trusted, flexible solutions developed around the demands of mining professionals, EHS Data will have the right solution for you and your environmental team.

Several of our former employees have already stated that they miss using MonitorPro, as they realise how much easier it made their life. They wish their new employer would make the investment.

Environmental Manager – Mining Client

MonitorPro

Key Facts

1000+
Trusted users worldwide

MCerts
First monitoring software to receive this quality certification

22 years
Research & development

200+
Global mining clients

Intelligent Innovation
Secure compliance obligations with powerful reporting

Helping our clients meet their environmental objectives

Over the years EHS Data have worked on many projects saving clients time, saving them money, simplifying their reporting and providing solutions to keep their data secure and defensible. Working alongside some of the biggest corporate enterprises in the global mining sector, providing the best solution to manage their environmental accounting, **MonitorPro** is a comprehensive environmental accounting process, which is highly configurable with incredible flexibility and scalability.

mCERTS
THE ENVIRONMENT AGENCY'S
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