

INTRODUCING THE MAP-X PLATFORM

GEOGRAPHIC INFORMATION MANAGEMENT SUPPORT FOR ARTISANAL AND SMALL-SCALE GOLD MINING NATIONAL ACTION PLANS UNDER THE MINAMATA CONVENTION



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MINAMATA

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environment

The Minamata Convention on Mercury was adopted on October 10th 2013 to address the effects and risks that mercury poses to human health and the environment. According to article 7 of the Minamata Convention, countries must take steps to reduce, and where feasible eliminate, the use of mercury and mercury compounds in, and the emissions and releases to the environment of mercury from, artisanal and small-scale gold mining (ASGM). To do so, the Minamata Convention requires the development and implementation of National Action Plans (NAPs) specific to the ASGM sector. Countries that have ratified the Convention and that have notified the secretariat that ASGM is more than insignificant within their territories are required to submit NAPs setting out national baselines and objectives within three years. In addition, countries are required to provide updates on progress made in relation to reducing mercury use in ASGM every three years.

INFORMATION MANAGEMENT RELATED TO NATIONAL ACTION PLAN IMPLEMENTATION

According to the Minamata Convention, each NAP shall include baseline information on mercury use and practices employed at ASGM sites. This information will assist with setting mercury reduction targets and the corresponding strategies, including steps to formalize or regulate the sector, measures to reduce mercury use, and measures to protect human health and prevent the exposure of vulnerable populations.

A diverse range of indicators is therefore relevant to policy making and progress monitoring of mercury reduction targets under the Minamata Convention. Among others, indicators can include the location of gold mining sites, mining licences and type of deposit, processing techniques at site level, gold production figures and demographics of miners, location of streams, and mercury trade flows.

Effectively managing this wealth of information, sharing it among government agencies and monitoring the effectiveness of mercury reduction strategies can be a challenge for implementing countries.

Given the nature of artisanal and small scale gold mining, the vast majority of relevant data sets are geospatial, in other words they can be visualised on a map.



For NAP implementing countries, using spatial data infrastructure to manage information for decision making processes, implementation and evaluation strategies of NAPs under the Minamata Convention has many advantages.

First, it creates a structure for managing and sharing knowledge. Instead of managing separate databases or spreadsheets, key actors can easily access and share datasets across institutions or government ministries concerned with natural resource management, health and the environment. It also allows for critical resources, such as ecologically sensitive sites or protected areas to be considered in planning, policy making and implementation.

Mapping the location of ASGM sites, where whole ore amalgamation or open burning of amalgam is performed, and the location of populated areas can help prioritise sites for intervention. In this way geospatial information management can help to eliminate the worst practises of mercury use and protect the most vulnerable populations from mercury exposure.



INTRODUCING MAP-X

MAP-X is an online mapping platform which has been developed by UN Environment to support the sustainable development of natural resources and to help entities working in the natural resource sector transform authoritative information into impact.

THE MAP-X PLATFORM WORKS BY:



Aggregating the best available data and assessing the data integrity



Providing visualisation and analytical tools



Offering customised dashboards for managing and monitoring data

MAP-X can provide a full range of information management, analysis and progress monitoring functions to support knowledge management for NAP implementing countries.

TOOLS AND FUNCTIONALITIES INCLUDE:



VISUALIZE

- Visualize geological data: visualize distribution of mineral reserves including gold deposits
- Visualise environmental risks by streaming external data sources: evaluate and prioritise interventions in areas with particular environmental risks such as flood risks
- Land use change detection using satellite image analysis (under development): identify evolution of gold mining sites over time using historical satellite image analysis



ANALYZE

- Create heatmaps and contextualize your datasets: identify distribution of gold mining sites and mercury hotspots or track progressive formalization by monitoring mining licences issued over time
- Overlap analysis: identify coincidence between mercury contaminated sites and industrial concessions or protected areas and correlate different themes and secondary indicators such as public health data



MANAGE

- Geo-locate field data, photos and aerial surveys: upload and manage multimedia field data, photos and videos for mercury inventories
- Designate areas of interest and receive automated updates when new data is uploaded
- Define user and access rights to enable the sharing of sensitive datasets for selected users only



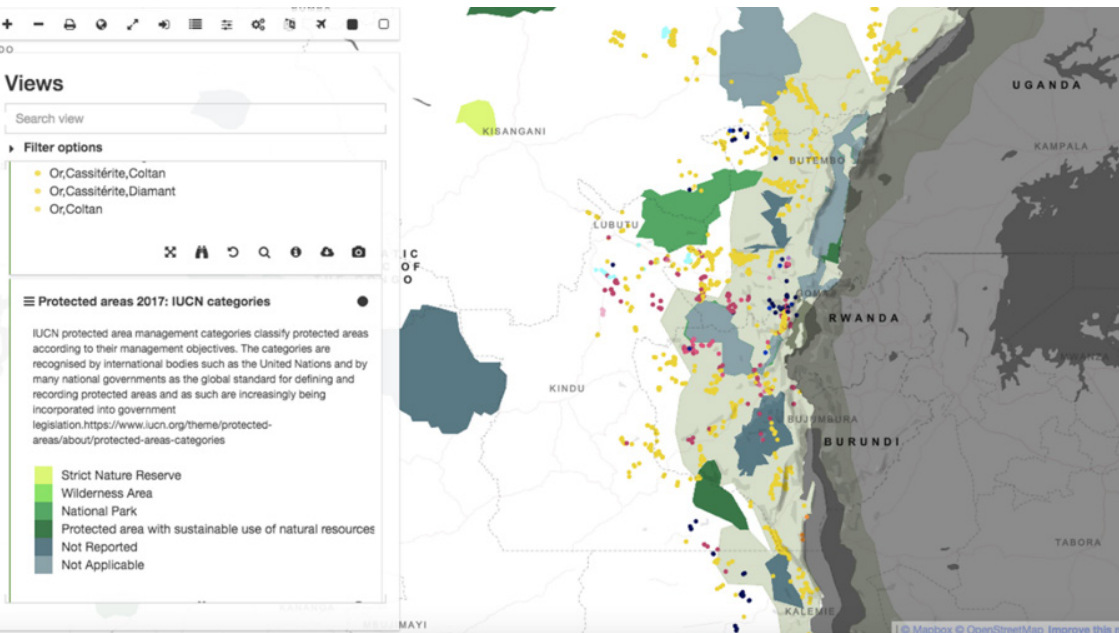
MONITOR

- Site specific data collection and modelling of spatial data for mercury inventories: tag processing techniques, environmental risks and manage and visualise site-specific data
- Reporting and outreach: download maps and data for progress reports and create story maps to share your country's journey in reducing mercury use and support outreach to citizens
- Performance monitoring dashboards: monitor mercury reduction on country level by customizing dashboards to meet specific monitoring needs

MAP-X provides an impartial and fully customized platform to facilitate information management and data sharing within and across national governments.

The platform can simplify progress monitoring and reporting and is optimized for low connectivity environments.

MAP-X can therefore support countries that are developing ASGM National Action Plans to meet their obligations under the Minamata Convention and help contribute to the global efforts to reduce mercury use and emissions.



MAP-X example of artisanal gold mining sites in protected areas in Eastern Democratic Republic of Congo



DEPLOYING MAP-X IN YOUR COUNTRY

As part of UN Environment's assistance to the countries developing NAPs, referred to also as the NAP Global Component, MAP-X is currently developing a customized dashboard to support implementing countries in managing information related to mercury use and reduction in the artisanal and small-scale gold mining sector collected under the NAPs.

After launching the customized NAP dashboard in September 2017 (COP1), MAP-X will be available for implementation at the country level. In addition to supporting information management by populating the dashboards with national datasets, MAP-X can develop specific dashboards, contextualize datasets and support data storytelling.

In this way it can support the decision making, implementation and effective evaluation under the Minamata Convention.

Last but not least, the MAP-X team offers capacity building to in-country platform users and data providers to support progress reporting and to improve data integrity over time.

To schedule a live demonstration of the platform and discuss how MAP-X can support your National Action Plan information management requirements, please contact:

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A beta version of the platform is available at:
www.mapx.org



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