Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

TECHNICAL COOPERATION

EXTERNAL EVALUATION – SHORT REPORT

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Technical evaluator: -

Promotion of Quality Infrastructure with Emphasis on the Mining Sector

Country | Region:	Mongolia
Project No.:	PN 2014.2133.8
Period:	10/2014 – 09/2017
Executing Agency:	PTB
Implementing Partner:	MASM
PTB | Working Group:	Q.52
PTB | Project Coordinator:	Petra Hagemann (acting)/Corinna Weigelt (former)
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List of abbreviations

APLAC	Asia Pacific Laboratory Accreditation Cooperation
BAuA	Bundesanstalt für Arbeitsschutz und Arbeitsmedizin German OSH Institute
BGR	Bundesanstalt für Geowissenschaften und Rohstoffe German Institute for Geo-Sciences and Raw Materials
BIPM	International Bureau of Weights and Measures
BMZ	Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung German Ministry for Economic Cooperation and Development
BMWi	Bundesministerium für Wirtschaft und Technologie German Ministry of Economy
CEN	European Committee for Standardisation
CMC	Calibration and Measurement Capabilities
COSH	Center for Occupational Safety and Health formerly OHRC
CSB	Companion Standardisation Body CEN programme
CW	Capacity WORKS
DAC	Development Assistance Committee OECD
DAkkS	Deutsche Akkreditierungsstelle German NAB
ETML	Electricity and Temperature Measurement Laboratory MASM
EU	European Union
GASI	General Agency for Specialized Inspection

GIZ	Gesellschaft für Internationale Zusammenarbeit German International Cooperation, formerly GTZ
GTZ	Gesellschaft für Technische Zusammenarbeit today GIZ
iKZE	Intermittierender Kurzzeitexperte intermittent short time consultant
IMF	International Monetary Fond
IMRI	Integrated Mineral Resources Initiative
ILAC	International Laboratory Accreditation Cooperation
IPRT	Industrial Platinum Resistance Thermometer
ISO	International Standards Organisation
ITC	International Trade Center
MASM	Mongolian Agency for Standardisation and Metrology
MEDEA	Metrology – Enabling Developing Economies in Asia
MNAS	Mongolian Accreditation System
MNMA	Mongolian National Mining Association
MNS	Mongolian Standard
MNT	Mongolian Tugrik
MoLSP	Ministry of Labour and Social Protection
MoM	Ministry of Mining
MPP	Mongolian People’s Party
MRAM	Mineral Resources Authority of Mongolia

NAB	National Accreditation Body
NDIC	National Development and Innovation Committee
NGO	Non-Governmental Organisation
NMI	National Metrology Institute
NQI	National Quality Infrastructure
OECD	Organisation for Economic Co-operation and Development
OHRC	Occupational Health Research Centre today COSH
OHSAS	Occupational Health- and Safety Assessment Series
OSH	Occupational Safety and Health
OSHMI	Occupational Safety and Health Management Institute of Mongolia
PBA	Programme Based Approach
PPP	Public Private Partnership
PN	Project Number
PTB	Physikalisch-Technische Bundesanstalt German NMI
QI	Quality Infrastructure
QM	Quality Management
QMS	Quality Management System
SANAP	Strengthening Accreditation Networks in Asia-Pacific
SF	Success Factor Capacity WORKS

SMMSS	Support to the Modernisation of the Mongolian Standardisation System programme
SPH	School of Public Health
SPRT	Standard Platinum Resistance Thermometer
TC	Technical Committee
TÜRKAK	Turkish Accreditation Agency
USD	United States Dollar

1. Project Description

Before the worldwide price decline of raw materials, the economy of Mongolia has grown by up to 12% annually. The country 's economic growth is based on its rich raw material reserves, such as fossil fuels, metallic raw materials and industrial minerals. At the same time, Mongolia's international trade relations in the mining sector have increased. However, the dependence on the export of raw materials makes Mongolia's economy vulnerable against price fluctuations. The enormous importance of the sector for the future economic development of Mongolia and income support for large parts of the population require an appropriate legal-normative framework as well as effective institutions and structures to ensure a sustainable and socially broad economic development. This includes an internationally recognized quality infrastructure (QI): standardisation, metrology, accreditation and conformity assessment. So far, the QI of Mongolia does not meet the needs, especially demands of the private sector, and only a few services are internationally recognized. At present, there is a lack of the provision and effective use of the national QI, which is needed in order to exploit the potential of the mining sector serving for a sustainable socio-economic development of Mongolia (core problem).

The objective of the project is to improve selected quality infrastructure services required for occupational health and safety in the Mongolian mining sector in accordance with international requirements. The project is co-operating with MASM and the Ministry of Labour and Social Protection. In the context of German development cooperation, the project is a module of the program for the promotion of sustainable raw material management. Close coordination and cooperation is foreseen, in particular, with the GIZ Module of the Integrated Raw Material Initiative.

The methodological approach focuses on the strengthening of the institutional competences of the actors of the quality infrastructure (meso level). In addition, awareness-raising measures and the elaboration of standards are foreseen, which should be incorporated into technical regulations.

The German contribution includes expert, organizational and process advisory through international, regional and national short-term specialists, training as well as internships, the organization of ring comparisons and information measures. Allowances in kind, in particular laboratory equipment, are only provided to a very limited extent.

The target group are the users of services of quality infrastructure in the mining sector. These are, in particular, mining companies, their suppliers and the customers of mining products. The target group also includes actors who carry out testing, inspections and measurements of the relevant components. The final beneficiaries are workers of the mining sector as well as the population in the mining regions.

Political partner is the Ministry of Labour and Social Protection.

Implementing organisation is the Mongolian Agency for Standardization and Metrology.

Furthermore, other relevant QI institutions participate in the project. These include in particular laboratories providing services in the mining sector, the Mineral Resources Authority of

Mongolia (MRAM) and the General Agency for Specialized Inspection (GASI). In addition, the Mongolian National Mining Association (MNMA) is an important intermediary.

2. Assessment of the project

The overall rating of OECD-DAC evaluation criteria is 2.8.

2.1 Status of the change process

Relevance (rating: 2)

The high relevance to address issues of OSH in the Mongolian mining sector, especially dust protection (component 2), is substantiated by a high prevalence of dust related disease as well as efforts made by the respective ministry and the Mongolian Government.

As core problem, however, a weak provision and use of QI services was identified instead of insufficient OSH in the mining sector.

Hence the project's strategic direction (main objective) does not aim clearly at improving the working conditions for miners but strengthening QI services. Demand orientation and target group focus was not considered sufficiently.

Effectiveness (rating: 3)

The logical framework of the project is not fully comprehensive: Focus on metrology and standardization to improve OSH instead of e.g. regulation and conformity assessment.

Indicators are hardly beyond the output level; impact orientation is low.

Overall indicator fulfilment: 57%

Indicator fulfilment per component: 1-Metrology (80%); 2-Standardisation (70%); 3-Capacity Development and Awareness (20%)

Impact (rating: 3)

Generated results by the project are not yet being used (e.g. dust standards and regulations) or it is unknown whether their use has a positive effect on OSH in the mining sector (e.g. calibration services).

Contributions have been made to initial steps towards making the standardisation process more inclusive as well as towards consolidating the OSH system in Mongolia.

Efficiency (rating: 3)

The overall outlook of cost-benefit ratio and financial management is comprehensive and reasonable.

However, some activities did not lead to the expected results (e.g. QMS in the ETML) and even in the absence of deadlines within the indicators several outputs were delivered delayed. Component 3 was hardly implemented.

Local staff hired for administrative support as well as explanation/translation of Mongolian systems/culture etc. assumes a positive function. However, some of the tasks are usually provided by the counterpart.

Sustainability (rating: 3)

Key results need follow-up measures in order to continue unfolding their impact.

Main challenges to the sustainability of project results are a low ownership and limited commitment by the project partner, granted financial resources to maintain established services and concentration of knowledge and capacity in few staff members.

2.2 Success factors for the observed results and change processes

Strategy

The project team seems to be quite confident of the project's strategic approach. However, there are different opinions within the team. Doubts about whether the partner is aware of the impacts aimed at should be thought provoking.

From the rapporteur's view there is no explicit shared project strategy but rather a decentralised laissez-faire approach in which each technical expert practically follows her or his own strategy.

Internal strategic reflection sessions combined with impact monitoring have apparently not been conducted.

Cooperation

PTB has organised cooperation mainly with other bilateral and regional PTB projects as well as with GIZ and the EU. In contrast MASM is perceived as having weak collaborative relationships to relevant actors in the field.

The following key stakeholders have not been integrated sufficiently into the project's cooperation strategy: Ministry of Mining, GASI, mining companies and associations, workers' representatives.

A systematic cooperation management involving also the partners has apparently not been conducted.

Steering structure

The absence of a steering structure is one of the most critical aspects of the joint project management. In addition, main instruments like annual operational plans and progress monitoring have not been deployed. Consequently, communication and knowledge sharing is a challenge that affects also SF 5. There is no joint management team that oversees and steers the whole project.

Processes

The self-assessment by the team reached the highest score. However, the rapporteur's assumption is that the concept behind SF 4 is not clearly reflected within the questions. Therefore, it can be assumed that a process landscape has not been used in order to select systematically the main (sub-) processes and assign responsibilities.

Learning and innovation

Again, the questions of the self-assessment appear to be partially misleading.

In general, it can be said that documentation is rather weak within the project and relevant information is distributed among individuals.

With respect to strategies of learning and innovation on different levels (policy, networks, organisation, individuals) it can be stated that the focus lies on the training and advising of individuals. Within the standards development interventions were made on network level. However, there is no systematic use of the factor and MASM as the main partner organisation has not been considered sufficiently from the perspective of SF5.

3. Learning processes and learning experience

Unstable political and economic frame conditions

The economic crisis and the political instability has proliferated personnel fluctuation at political and authority level as well as tight public budgets.

Deficient Mongolian QI System

The NQI of Mongolia is still far from the performance of Western QI systems and remains affected by the centralised and hierarchical tradition of past Soviet times. Resistance against change, passive and active, due to loss of privileges and influence is thus comprehensible. Stakeholder engagement and customer/demand orientation remain challenges that call for a shift of attitudes towards a more democratic, horizontal and collaborative approach of public services. From an international point of view accreditation is not organised in a satisfactory way. QI policy drafts have not been ratified by the Mongolian Parliament. Hence, the legal framework for the reform of the actual QI institutional landscape is missing.

Improvements in the OSH System

It seems as if there are improvements within the OSH system headed by the MoLSP and coordinated by Centre of Occupational Safety and Health (COSH).

General appreciation between cooperation partners

Despite the internal and external challenges identified throughout this review, a general appreciation, empathy and respect for the involved partners was expressed by the interview partners. Also, it was perceived as if the cooperation between MASM and PTB has improved lately.

Weak project management and impact orientation

It could be observed that the (joint) project management of PTB and MASM is rather weak. Examples are: an absent steering structure, insufficient strategic/impact orientation, lack of systematic and documented operational planning, insufficient use of monitoring. In addition, staff change on both sides, PTB and MASM, has hampered the establishment of effective management structures and processes.

Perceived low ownership and commitment of MASM

Lack of ownership and commitment of MASM is perceived by PTB who has the expectation that MASM assumes a more autonomous, co-responsible and pro-active action in the project. In contrast, MASM seems to leave responsibility to PTB and expects them to deliver the project's services. This is an indication that expectations, roles and responsibilities as well as the general concept of international technical cooperation projects (ownership, co-responsibility, accountability, impact orientation etc.) have not been discussed and negotiated sufficiently amongst the partners.

Difficult communication and language barrier

The above-mentioned diverging expectations and unclear roles are also connected to challenges in communication and information sharing which is fragmented. The language barrier, also felt during the evaluation, is a serious issue and potential root of misunderstanding and confusion.

Local-based support

Local staff hired by PTB was perceived positively providing administrative and logistic support as well as interpretation and translation services. However, usually the counterpart assumes most of these tasks.

Meta-level: lessons learnt on the process of evaluation

The experience shows that a desk study can be an efficient alternative to an on-site evaluation.

Challenges were: capture sufficient understanding of Mongolian side; assigning grades for the DAC evaluation criteria in the absence of an evaluation scheme; assessment of Capacity WORKS success factors (suitability of questions, no guideline) and the report template (format, file size).

4. Recommendations

Joint strategic orientation and co-responsibility

Partners should be made familiar with the concept of impact orientation. It needs to be clarified that the partners are NOT the recipients of the aid but co-responsible protagonists that need to make an effort to provide a benefit for the target group. On the other side, PTB must also listen to the partners, understand their situation and react accordingly.

Focussing on the acquisition of laboratory equipment is neither strategic nor the role of PTB's technical cooperation who provides knowhow transfer and capacity development in the first place.

It should be asked for a contribution of the partner organisation(s) in order to stimulate co-responsibility, ownership and commitment. Roles and expectations should be discussed and clarified as well as mechanisms to increase compliance with agreed decisions.

Project management, steering structure and cooperation system

All partners should be able to assign a suitable person for participation in a joint project committee. A mechanism for decision making should be agreed and documented. Technical working groups for each component that are coordinated horizontally and are responsible for the operational planning and implementation of the activities. The steering level does approve operational plans or significant changes and assumes progress and impact monitoring.

Once the internal project organisation is set it should be enhanced by the cooperation system. Those actors identified as strategic allies who are paramount for the achievement of objectives, must be connected with the steering structure and integrated systematically into the project by participating in workshops and activities, receiving information and collaborating with the project. In this regard, it is recommended to make use of the Capacity WORKS concept and toolbox.

Learning and Innovation

Communication is the base for learning and innovation and thus needs to be improved in all ways. The same applies to relationships of mutual trust and respect that are necessary to address and treat delicate issues in a constructive way.

An understanding of communication concepts and models, of cultural differences, of the political economy in Mongolia etc. are the soft factors that need to complement technical expertise in order to create a learning environment. Analysis should be used as input for strategic debates. For this purpose, the project should organize annual sessions for strategic reflection, knowledge sharing, impact monitoring and steering decisions.

The design of trainings and interventions by consultants should be enhanced by e.g. introduce internal feedback/evaluation schemes for workshops, trainings and consultancies and use the results to design and enhance future interventions.

Mainstream demand orientation

Mainstream demand orientation within the project's indicators on outcome level: Instead of focussing on QI services established, focus on QI services being used by specific clients or target groups. It will help the project to adopt a more demand-driven approach. Parallel to this, impact monitoring and operational planning needs to be used systematically to sustain this strategic direction.

Specific recommendations for the future project

Potential focus areas:

- follow-up on the implementation of approved dust regulations (use of output)
- continue supporting MASM in the consolidation of an inclusive process of standardisation (meso-level)
- follow-up on the "legacy" of the EU SMMSS, especially with respect to the draft laws that should provide a solid legal framework for the development of the NQI system (macro-level)
- optional: promote implementation of OHSAS 18.001 in selected mining companies (micro-level).

Potential partner institutions:

- continue partnering with **MASM**'s Standardisation and Conformity Assessment Policy Department in order to consolidate standardisation process. Clarify within project appraisal mission whether to continue collaboration with the NMI (if yes than how?) or leave it to the energy project.
- When the focus continues on (broader) OSH: include the **MoLSP** as partner organisation.
- Alternatively: placing the focus more specifically on "OSH in the mining sector" would mean to move closer to the **MoM**.
- Optional: when deciding to reprise component 3 "Capacity Development" and/or dust sampling and testing, consider partnering with the **SPH**. Mr Naransukh has proved to be a reliable and committed ally.

Strategic alliances:

- **GIZ** project "Support to the Revision and Modernisation of Mongolian OSH legislation" (Mr Batbold) is a key contact, resource person and ally for working with mining companies and OHSAS 18.0001 certification, approaching the MoM and its OSH sub-committee.
- **GASI** should become a strategic ally when deciding to focus on inspection of dust protection regulation.
- **World Bank** is working with GASI and could assist with establishing contact.

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