

Mercury-Free Mining in the Philippines
2014-2017

Project Evaluation Report

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Acronyms and Abbreviations

ALS	Alternative Learning School
ASGM	Artisanal Small-Scale Gold Mining
BBA	Banao Bodong Association
BBTA	Banao Bodong Tribal Association
BBT	Batang Bantay Toxics
BOT	Board of Trustees
BT	Ban Toxics
CIP	Cyanide-in-Pulp
COC	Certificate of Conformity
CHW	Community Health Worker
CSO	Civil Society Organization
BHW	Barangay Health Worker
BNS	Barangay Nutrition Scholar
DENR	Department of Environment and Natural Resources
DepEd	Department of Education
DOH	Department of Health
DOLE	Department of Labor and Employment
DOST	Department of Science and Technology
EMB	Environmental Management Bureau
EO	Executive Order
ESO	Environment Stewards Organization
FGD	Focus Group Discussion
FPE	Foundation for the Philippine Environment
GAD	Gender and Development
GCM	Gravity Concentration Method
IEC	Information, Education, and Communication
IRR	Implementing Rules and Regulations
JP	Jose Panganiban
KII	Key Informant Interview
LGU	Local Government Unit
ILO	International Labor Organization
IP	Indigenous Peoples
M&E	Monitoring and Evaluation
MENRO	Municipal Environment and Natural Resources Office
MGB	Mines and GeoSciences Bureau
MHO	Municipal Health Office
MMT	Multipartite Monitoring Team
NAP	National Action Plan
NCIP	National Commission on Indigenous Peoples
NGO	Non-Government Organization
NSC	National Steering Committee
NSP	National Strategic Plan
PEMO	Provincial Environment Management Office
PENRO	Provincial Environment and Natural Resources Office
PMRB	Provincial Mining Regulatory Board
PSSMA	Pinuhan Small-Scale Miners Association
PTA	Parents-Teachers Association
RA	Republic Act
SCG	Student Council Government
SSM	Small-Scale Mining
TOR	Terms of Reference
TWG	Technical Working Group
UNEP	United Nations Environment Programme
UP	University of the Philippines

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Executive Summary

A. Major findings by evaluation criteria

1. *Relevance*

BT is the only organization in the country working on Mercury elimination in ASGM communities. Being a largely informal sector, ASGM is still an unrecognized industry producing 80% of the country's gold supply. In terms of workforce, it serves as primary economic resource for roughly 400,000 individuals across 40 provinces in the country. Its contribution to gold production and the number of people who depend on artisanal gold extraction speak of the unchecked magnitude of Mercury use in the country. Considering the devastating effects of Mercury on health, individuals, and communities, and its negative impacts on the environment, BT has critically examined its advocacy in assisting ASGM communities understand the ill-effects of the chemical and adopt Mercury-free and safe technologies in artisanal gold extraction.

2. *Effectiveness and Efficiency*

Most of the project's desired results were realized, except for the target number of converts among SSM miners to practice Mercury-free method of gold extraction. The project produced positive unintended results as well as lessons and insights which are crucial in sustaining the initiative to reduce, if not eliminate, Mercury use.

Some of the notable project gains are on: (a) the extent to which miners and other stakeholders were educated about Mercury and its adverse effects on people and environment which led to actual reduction of Mercury released to the environment; (b) production of trainer's manual; (c) development of local technical miner trainers; (d) formation of a national coalition of miners; (e) formation of women and youth groups that are also pushing the government to act on the issue of Mercury use and exposure; and, (f) fund leveraging—the project was able to leverage funds both from government and private sectors (e.g., Provincial government of South Cotabato, ILO, UNIDO, Japanese University and Institute).

The project was able to finish within the given timeframe of three (3) years, with few months extension for report writing at no additional cost. Fund utilization for activities has a burning rate of 82.82% as of March 2017. The project did not exceed the approved budget for three (3) years.

3. *Impact*

Overall, there is improved awareness in the three (3) project sites among various stakeholders about the negative impacts of Mercury on health and environment, and about the GCM.

In T'Boli, South Cotabato, out of the 75-80 registered ball mill operators and processors in the municipality, about 70% have already reduced their Mercury use from an estimated 20 grams/per drum to an estimated 3 grams. Several SSM miners have also acquired sluice boxes so that they can apply their learnings on GCM.

In Jose Panganiban, Camarines Norte, trained subsistence SSM miners have learned how to extract gold using Mercury-free GCM. Nonetheless, various factors have constrained their adoption, e.g., attitude, lack of capital and facility to apply GCM learnings.

Gaang, Kalinga has maintained its "Mercury-free" status even after BT's exit from the area.

In each project site, although at varying degree and number, there are already model miners and ball mill operators who live as examples in proving that transition to gold extraction and processing without Mercury use is possible.

4. *Sustainability*

In T'Boli, South Cotabato, the initial stages of conversion into Mercury-free method have started. Hence, the momentum in the area needs to be maintained to attain a critical mass of technology adopters in the next three (3) to five (5) years.

In Jose Panganiban, the formalization of miners' associations and the strategy to get the approval for their proposed *Minahang Bayan*¹ are necessary to sustain project outcomes.

Sustainability in Gaang, Kalinga needs to be constantly monitored and nurtured so that project gains in the area will not be lost in the long term.

Increasing the number of local champions and trainers, implementation of workable local action plans, provision of support (e.g., facilities for GCM, livelihood projects), and robust policy implementation on Mercury elimination (e.g., EO 79, Provincial Mining Clearance, etc.) are crucial factors to sustain the project outcomes in both T'Boli and Jose Panganiban in the medium to long term.

With new complementary projects interfacing in South Cotabato and Camarines Norte and supported by international organizations, the goal of reducing Mercury use in ASGM areas will certainly continue in these two areas. Since the ILO project looks at improving the working conditions in ASGM, it inevitably deals with Mercury exposure as one of the issues affecting labor conditions of artisanal and small-scale miners.

5. Project Management

The management and staff were able to respond to changing condition on the ground by re-strategizing and modifying priorities based on what were practical and strategic in reaching project targets. Taking full advantage of information communication technology (ICT) facilities, communication between BT and Diálogos has been open and constant despite the physical distance. There has been a good collaboration also between BT and its local partners.

Considering the coverage of three (3) far-flung provinces, with lean workforce, managing the project has been quite a challenge. BT's lean workforce has been complemented by developing local experts/champions per project site who have helped organize work and capacitate target miners on GCM (i.e., Nono Perez in South Cotabato and Solomon in Kalinga). In Camarines Norte, however, there is still no practicing local expert on GCM which, together with other factors, has contributed to the slow adoption of GCM in the area.

One strength of the project is the complementation of efforts and expertise between Diálogos and BT—the relation of the two organizations has been very productive especially with the annual visit of Diálogos to the mining communities. Target outputs per project site were also closely monitored by both organizations. Another strength of the project is having a decisive project manager who is really serious in achieving the desired project results and in immediately implementing corrective actions when needed.

In terms of time management, the conduct of project activities ended on time last June 2017, except for report writing which was extended by two (2) months. Despite the voluntary nature of Diálogos' work, its technical volunteers had managed to be efficient in terms of report submission.

Before the project ended in June, conflicts that arose among staff and with partners on the ground were already resolved, except in Gaang. Recently, the new officers and members of BBTA have expressed openness to reconcile with BT. However, according to BT, conflict resolution with BBTA will not automatically result in a project partnership because the mining activities in Gaang are inside a protected area, thus making the project illegal. BBTA has to resolve this issue first among themselves. The Gaang miners, on the other hand, can be part of the national coalition that has already been formed to help advance the rights of ASGM.

B. Conclusion

Diálogos and BT, in its phase-2 project, were guided by these objectives, namely: (a) conversion of miners to use GCM; (b) inclusion and empowerment of sectoral stakeholders in the conversion process, such as the healthcare sector, women, youth, politicians, and government agencies; and, (c) sustainability of their projects and activities which targeted community and institution building. These

¹ "Minahang Bayan" or "People's Small-Scale Mining Area" refers to the entire area declared as People's Small-Scale Mining Area pursuant to RA No. 7076 known as The "People's Small-Scale Mining Act Of 1991." The law defines small-scale mining as the extraction of minerals which rely heavily on manual labor using simple implements and methods and do not use explosives or heavy equipment.

objectives were achieved in Gaang, and T'boli, but the first objective posed greatest challenge in Jose Panganiban (owing to various push and pull factors) in contrast to the two other project sites.

In T'boli, South Cotabato, BT has been successful in enlightening key government officials and agencies on the necessity of articulating a clear stance that the province and municipality intend to put an end to Mercury use in small-scale mining. This ideological commitment functioned as the LGU's foundation in motivating small-scale miners to adopt GCM as a viable alternative to Mercury use in gold processing, and their plans of providing soft loans so processors can convert their rod mill stations into Mercury-free facilities. Given that the LGU has been consistent in its position to partner with the advocacy of BT, the other target sectors of the project in T'boli followed suit. The eager and active participation of Bantay Batang Toxics (BBT) in continuing the lectures on anti-Mercury use stands as a good example on the positive implication of the project to the community of miners in the municipality.

For Camarines Norte, BT has to contend with weak social institutions that conditioned many ASGM communities in the province. The need to search for local champions both in the level of the community and the local political landscape presented a different challenge which BT had to deal with. Specifically, BT had to confront the problem of organizing the various sectors in the province to work together for a common cause—Mercury elimination in ASGM.

While BT was successful in the conduct of lectures on Mercury toxicity and trainings on GCM, the pull from the cycle and complexity of poverty among miners in Jose Panganiban was too strong to inspire them to adopt GCM. Motivated by a clear intent to extract gold to buy food for the table, the local miners remained distant to the future effects of Mercury on their body and environment. Despite such setbacks, BT has remained influential in the filing of two (2) requests for *Minahang Bayan* in the area. These applications, though referring to small-size areas in contrast to the vast hectares of land for large-scale mining operations, may be considered important steps in cultivating local champions who stand by BT's Mercury-free principle in ASGM in the province.

Overall, the project is highly relevant as it contributes to efforts to elevate consciousness among miners and the public on Mercury and on the struggles of ASGM miners.

Despite the challenges and constraints, the strategies employed were effective as evidenced by the outputs and outcomes generated by the project.

C. Lessons learned

1. An important lesson learned in Kalinga is to get a competent local coordinator who can effectively and efficiently perform his/her project deliverables in order not to impede project implementation.
2. Considering the remoteness of Gaang, Kalinga and the non-availability of reliable communication system, a more effective monitoring and evaluation (M&E) system should have been set up (e.g., weekly reporting and periodic presence of an M&E officer who should be external from the community but part of BT's program/project staff to ensure more objectivity and thorough assessment).
3. Project design needs to better consider the specific local contexts and peculiarities of each project site (e.g., *Minahang Bayan* or not a *Minahang Bayan*), and to consider the various societal issues (e.g., vices, poverty, corruption, poor governance, and lax policy enforcement) that can impinge on project implementation. Hence, committed targets for each area need to be calibrated considering unique local contexts and peculiarities.
4. Increasing the level of learnings and awareness of miners and other beneficiaries/ partners in the project sites is more attainable. Notably, the project has been successful in improving awareness of a huge portion of the population in its project sites. Its IECs and advocacy work have assisted in magnifying and elevating the issue to get the attention of government officials.
5. Miners generally find it hard to move from their "comfort zone" (i.e., use of Mercury) to GCM. Translating learnings into action will require multi-dimensional approaches, including examining the push and pull factors that affect their technology adoption (e.g., availability of resources, attitude, viability of options, etc.). Hence, a project intervention that seeks to change behaviors will require a longer gestation period for it to be effective.
6. The project has to be understood based on the different local contexts of the three (3) project sites:

- In T'boli, South Cotabato, the project team cooperated with very eager authorities (e.g., governor and DENR).
 - In Jose Panganiban, Camarines Norte, the project team cooperated with unreliable politicians and landowners who were mainly interested in preserving the status quo. In addition, the land was owned by a myriad of landowners who only have their self-interests in mind. Despite being the project site for Phase 1, there was indifference among several target groups in the province, including the government. It was a challenge gaining their trust and respect. There were also no organized miners' associations at the start of the project in the municipality, unlike in the two (2) other project sites.
 - In Gaang, Kalinga, it was a strong tribal organization with interest in creating goodwill for all miners in the area, and a common ownership of the ground.
7. Diálogos/BT have identified the following major learnings in the three (3) project sites:
- In T'boli, South Cotabato, the project team could have put (even) more pressure on DENR to enforce the Mercury ban, and pushed the relevant government agencies (provincial and municipal LGUs) to provide subsidies / soft loans for new equipment.
 - In Jose Panganiban, the project team could have re-strategized its approach in getting the support of local politicians and “buy-in” of more community stakeholders. BT did this in the beginning of this year by going to the next level: the provincial LGU of Camarines Norte. Moreover, the assumption that miners would shift to GCM after a series of trainings had to be rechecked as there are various pull and push factors affecting miners' decision to adopt GCM.
 - In Gaang, Kalinga, the project team could have been more careful in its project success. The use of Lumex machine to control the use of Mercury may have turned many miners against BT/Diálogos. Also, Diálogos should have been more officially in contact with BBTA to maintain good relationship after Ken left.
8. Organizing study trips among government officials in project sites (e.g., officials/politicians from Camarines Norte) to a “best practice” area (e.g., South Cotabato) can help increase their interest to pursue smart regulation and enforcement.
9. BT has identified the following factors contributing to fruitful project implementation:
- Effective combination of strategies—organizing, IEC, research, trainings (general, miner-to-miner, Training of Trainers (ToT), and one-on-one coaching), developing local champions/technical miner trainers.
 - Passion and commitment of seasoned staff with solid background in organizing.
 - Executive Director's (ED) / management's holistic approach to the problem concerning Mercury and ASGM miners. BT continuously finds ways to complement the project with other forms of support that were not part of the project.
 - ED/management is good in resource mobilization and in tapping opportunities that made the holistic approach feasible.

D. Recommendations

On effectiveness:

1. Strengthen community immersion and involvement,, intensify groundworking, and enhance strategies to get the support of the community specifically the project stakeholders, such as miners, on adoption of GCM
2. Correct the assertion of some miners that GCM is not practical if they have more ores to process (e.g., 1 ton), and rectify the wrong narrative (particularly in Jose Panganiban) that Mercury method can yield more gold compared with GCM.
3. For Jose Panganiban, Camarines Norte, assist the small-scale miners association in its application for *Minahang Bayan*, which can help put in place the institutional structure for the implementation of policies on Mercury and adoption by SSM miners of Mercury-free method.
4. Provide technical and legal support to LGUs in crafting policies (e.g., LGU ordinances) so that these policies will have stronger teeth on enforcement.
 - Focus on stronger regulation in the short-term
 - Target Mercury elimination in the medium- to long-term

In the case of Jose Panganiban, more policy advocacy work needs to be pursued to have a local legislation that will address its problem of Mercury.

5. Aside from skills training, future projects in both South Cotabato and Camarines Norte may benefit from further focus on behavioral change so that acquired learnings can be translated into action. BT also recommends training on conflict management as part of its capacity building to better prepare the organization, Diálogos, and the communities in handling conflict (e.g., conflict in Gaang) and other related issues from the ground.
6. Help facilitate the provision of low-cost Mercury-free facility that can be used by SSM miners and ball mill operators and processors, and constantly monitor/track progress:
 - Segmentize assistance for conversion by category and prioritization:²
 - SSM miners (*priority 1*)
 - Poor / subsistence SSM miners
 - Migratory SSM miners (particularly in the case of Jose Panganiban)
 - Micro ball mill operators and processors (*priority 2*)
 - Small ball mill operators and processors (*priority 3*)
 - Medium-sized ball mill operators and processors (*priority 4*)

BT recommends the need to distinguish three distinct groups of miners that have their own specific needs: (1) artisanal level; (2) small-scale with no or limited capital; and, (3) small-scale with capital. For miners 1 and 2, the GCM should be sufficient to address gold-processing needs.

1. Provide technical assistance to law enforcers on how to store and dispose confiscated/ surrendered Mercury.
2. Address the problem of Mercury from the supply side by influencing policy enforcers (particularly in South Cotabato because it has a *Minahang Bayan*) to map out Mercury sources (e.g., traders and users) and to capacitate them in coming up with robust enforcement interventions to effectively cut off supply. Policy enforcers should be in the frontline of this effort since they are the duty bearers.
3. Constantly foster coordination with and among government agencies (e.g., between PEMO and DENR-EMB in South Cotabato) for more effective and efficient monitoring work, compliance, and enforcement of policies on Mercury. While BT acknowledges the national role of the NICP in working with IP communities, it admits that the agency can be difficult to work with both in the provincial and municipal levels. The team, however, recommends that a second look at a possible working relation with NCIP may be explored especially for long-term programs.

On sustainability:

1. Given the significant milestones and lessons learned from the project—the country and the ASGM communities will benefit if the project is sustained and replicated in other ASGM areas.
 - a. If replicated or scaled up, continue capacitating youth, women, and health workers as they are effective channels for IEC and advocacy work.
 - b. In choosing future project sites, it will be more prudent to choose a *Minahang Bayan* or a potential *Minahang Bayan* (which means that it will not have legal impediments such as being part of a protected area) so that the integrity of the project implementer will not be at stake whenever it is dealing with government agencies.
2. Institutionalize the implementation of the sustainability plan so that project beneficiaries, particularly local project champions/advocates, can continue with the initiative even after the end of the project.
3. Constantly and unrelentingly follow up with the provincial government of South Cotabato its commitment to help sustain the Mercury-free initiative, e.g., financial support for conversion, enforcement of Mercury ban, etc.
4. Help the provincial and municipal LGUs in South Cotabato to devise a formula to help ensure sustainability in terms of financial and maintenance aspects, including allocation for soft loans,

² Prioritization of financial and technical support is assessed according to who needs more financial assistance in shifting to non-Mercury method. Those who are able, like the ball mill operators/processors, who have the financial resources may also access support through loan facilities from the government at a low interest rate.

restoration, and Mercury decontamination of the *Minahang Bayan*, based on taxes collected from the *Minahang Bayan*.

5. For future projects, consider providing a financial instrument for small loans or subsidies for investments in new drums, pans, and other equipment to facilitate transition of miners to GCM.
6. Consider incorporating financial management and livelihood components into future interventions so that miners will have alternative sources of income if they decide to quit mining.
 - a. Monitor implementation of *kabuhayan* project of DOLE for Jose Panganiban, Paracale, and Labo in Camarines Norte.
 - b. Financial management training will benefit small-scale miners who are usually living like “one-day millionaires”; they need to learn how to save and invest their money in other economic endeavors.
7. Capacitate project beneficiaries on how to develop project proposals and to access resources/assistance on their own in order to help them sustain the Mercury-free initiative in their respective areas.
8. Have proper closure with BBTA in Kalinga whose new set of officers are hopeful to reconnect with BT.
9. If Kalinga is considered for future projects, priority identified by the community in Gaang is cleaning up the environment. Its being a protected area (where any form of mining is not allowed) should also be taken into account.

On project management:

1. For future project development, consider allotting the first year to conduct the following bottom-up, participatory approaches / activities: community entry, stakeholder engagement, situational analysis, and priority setting with the community. The project proposal (e.g., logframe) can be developed in the second year after all these activities are conducted in order to gain the full trust of the target community and to have more realistic and flexible project targets (i.e., context-driven and conditioned logframe) and community ownership. This strategy needs to be properly communicated to future funders.
2. If replicated/scaled-up in other areas, the management should include support, in close coordination with the government, in proper handling and storage of Mercury in the project sites and in environmental clean-up (maybe capacitating the government to do this).
3. To sustain monitoring and facilitate support for those in the process of conversion until they become 100% Mercury-free.
4. Further improve the formulation of indicators (e.g., baseline, midline, and endline) for more effective M&E and reporting.
5. For projects covering many areas located in different regions, a full-time M&E officer (besides a project manager) to keep track of progress is an advantage especially in detecting and resolving unique issues and concerns per project site. Moreover, learning from the Gaang experience, selecting a site that is accessible via vehicle and communication will have lesser strain on resources.
6. Recover the unreturned project equipment (computer, LCD, and printer) from the former staff in Kalinga who was terminated due to poor work performance. Those equipment belong to the project and not for personal use of the terminated staff. Same with the unliquidated cash advance; it should be liquidated especially now that the project is preparing its terminal report and closing the books of accounts.
7. BT should continue policy advocacy/critical engagement with different government agencies in pushing for stronger support for small-scale miners. The ASGM’s contribution to the country’s industrialization should not be underestimated. In fact, it will benefit the country if full support is given to them instead of giving more value to large-scale miners which just extract ores and ship them out of the country—bringing everything aside from what is only indicated in their permit.
8. It can help improve implementation of future projects if BT has a separate finance officer for Mindanao or for a project covering many provinces, especially if the project involves a lot of

trainings. Having a finance staff will help deload community coordinators and staff from doing liquidation reports. Hence, they can focus on their vital deliverables which include preparation of activity design/reports, facilitating trainings, lobbying, networking, organizing, among others.

9. Continue developing local technical experts/peer educators on Mercury-free method as this approach is both cost-efficient and cost-effective. It cuts the needed time to establish rapport with target miners as well as time to gain their trust. Also, BT does not have to worry much on the safety of the trainer for s/he is a local, has his/her family support system, and knows the community well.

Part I – Evaluation Background

A. Information on the evaluation

This project evaluation was undertaken to promote accountability for the achievement of the project objectives through the assessment of results, effectiveness, processes, and performance of stakeholders involved during project implementation.

It was undertaken from June 22 to July 30, 2017 by a team of project evaluation consultants composed of Allan V. Villanueva, Mary Ann V. Fuertes, and Raymundo R. Pavo.

B. Scope and objectives of the evaluation

The project evaluation was conducted in accordance with the scope indicated in the Terms of Reference (TOR) and the Inception Report (**Annexes 1 and 2**). Its main objective is to assess how the project has achieved its desired objectives or outcomes. Specifically, it sought to:

1. Determine the extent of accomplishment vis-a-vis project logframe aimed at three (3) main sectors/areas:
 - the miners
 - other stakeholders (politicians, health workers, CSOs—youth, children, women, among others)
 - sustainability of the initiatives to end Mercury use among miners
2. Identify any results—positive or negative—not foreseen in the project logframe and the project document
3. Assess BT's potential as an NGO and its potential as a project partner in future projects / interventions in the Philippines with regard to eliminating Mercury use/pollution
4. Give recommendations for future interventions in the area (if relevant)
 - Potential future project activities in the area
 - That can help BT strengthen its position as an NGO in the area further, even in the potential absence of funds from Denmark

C. Information sources and availability of information

Soft copies of documents produced during project implementation were submitted to the evaluation team upon request. These documents include, among others: baseline studies and follow-up studies; evaluation of Phase 1; project application/project document; quarterly and annual reports from BT to Diálogos (including status on objectives and indicators); and, field visit reports from Diálogos.

These documents were submitted by both Diálogos and BT during the period of the project evaluation (**Annex 3**).

D. Evaluation criteria and questions

The project evaluation criteria and questions are indicated in the Inception Report (**Annex 2**).

E. Methodological remarks, limitations encountered, and validity of the findings

Gathering of missing information as well as verification of information through key informant interviews (KIIs) and focus group discussions (FGDs) were done during the fieldworks of the project evaluators: July 1 to 3 (T'Boli, South Cotabato), July 6 to 10 (Gaang, Kalinga), and July 8 to 11 (Jose Panganiban, Camarines Norte). **Annex 4** lists down the key informants and FGD participants per project site.

Interviews with health and environment officials were made mainly with the regional offices as well as provincial and municipal offices since they are more immersed on the local issue.

Face-to-face interviews with the project management and staff, Skype conferences, and emailed questionnaires were also employed in clarifying some evaluation points with both BT and Diálogos.

The on-site interviews, FGDs, and observations in the communities were done to help establish consistency and rigor in data gathering from the three (3) project sites. These methodological steps were nuanced by a multi-sectoral approach to provide a sense of cogency to the narratives and accounts by comparing perspectives from individuals, groups via FGDs, the evaluators' assessment on what has taken place on the ground, and the stance of both Diálogos and BT. The combination of a multi-layered and multi-sectoral approach in data gathering procedure gives this report a strong inductive leverage to present its sets of inferences, conclusions, and recommendations.

A key methodological constraint to data gathering procedure ensued in the non-actual visit of Gaang Mines in Kalinga.. This methodological constraint was however, compensated by an FGD which took place at the Golden Gate Station which is at the entrance to the Gaang Mines., Sesec-an which was participated by eight (8) members of the Board of Trustees (BOT) of Banao Bodong Tribal Association (BBTA), two (2) barangay captains, and male and female miners in the mining community. BT's former staff in Gaang was also interviewed via phone call and text messaging to get her side of the story.

Figures included in this report are estimates, unless otherwise indicated. Sources of figures mentioned are the project reports from BT and Diálogos as well as respondents' estimates.

Part II – Project Background

A. Project summary / overview

The project, which is an extension of Phase 1 (2011-2014), seeks to capacitate SSM miners to convert into Mercury-free gold extraction techniques (e.g., GCM) and to pass on their knowledge and skills to fellow miners in three (3) project sites with varying local contexts, namely: (1) T'Boli, South Cotabato; (2) Jose Panganiban, Camarines Norte; and, (3) Gaang, Kalinga.

The project has also tapped civil society actors and advocates (e.g., women, youth, children, local authorities, etc.) to help build the momentum and sustain the adoption of GCM in the said sites.

B. Project objectives

The project's overall and specific objectives are indicated in the Terms of Reference (**Annex 1**).

C. Project components

Based on the project document, the project has three (3) major components, namely: (1) capacity building of miners on Mercury-free GCM; (2) stakeholder empowerment; and, (3) sustainability.

Part III – Evaluation Findings

A. Relevance

ASGM is still an unrecognized industry despite its 80% contribution to the country's gold supply. It employs roughly 400,000 individuals across 40 provinces in the country. The large number of people who depend on artisanal gold extraction speaks of the unchecked magnitude of Mercury use in the country because it is the fastest way to extract/process gold.

Considering the devastating effects of Mercury on health, individuals, and communities, and its negative impacts on the environment, BT has critically examined its advocacy in assisting ASGM communities understand the ill-effects of Mercury and adopt Mercury-free and safe technologies in artisanal gold extraction. Building on the gains and resolutions in Phase 1 of BT's engagements in Camarines Norte and Kalinga, Phase 2 included T'boli, South Cotabato in the organization's bid to expand its project reach. Having worked with miners in Gaang Mines, Kalinga; Jose Panganiban, Labo, and Paracale in Camarines Norte; and, T'boli, South Cotabato; BT is able to showcase various community models that can provide vital inputs for the implementation of the national strategic plan in eliminating Mercury use in

ASGM, and for upholding the treaties embodied in the Minamata Convention to which the Philippines is a signatory.

1. *Relevance of the project's objectives, outputs, and outcomes to the different target groups of the interventions*

The project objectives were based on consultations conducted by BT with SSM miners, indigenous association, and local authorities in Kalinga. They were also based on the request of the LGUs in Camarines Norte and in South Cotabato for technical expertise in Mercury-free mining, monitoring, training local health workers, and mainstreaming the Mercury-free message in their respective localities. Notably, the miners in South Cotabato categorically expressed their wish for the project intervention to address the issue of Mercury use in their area.

Both the DENR and DOH had also expressed their support to sustain their partnership with BT for the implementation of Phase 2.

As to outputs, the project has contributed to the general awareness and increased knowledge of the project beneficiaries in both South Cotabato and Camarines Norte about the negative effects of Mercury use on both health and environment. For instance, key informants in South Cotabato (e.g., youth) are aware of a study on air quality in their municipality, and local officials know about a Mercury monitoring study using Lumex in their locality.

Based on interviews conducted in T'Boli, South Cotabato, the miners, civil society actors (women, youth, and children), and LGUs (municipal and provincial), BT's project is deemed important in increasing awareness on Mercury toxicity and in contributing to efforts to reduce and to eventually eliminate Mercury use in their area.

The women's organization interviewed in Jose Panganiban, Camarines Norte have also validated the relevance of the project in increasing the awareness of the people in their municipality on the negative effects of Mercury, in facilitating the formalization of their organization, and in providing support for their application for *Minahang Bayan*. Key informants interviewed are also aware of the contamination of their bay and rice fields.

In Gaang, Kalinga, the interviewed officers and members of the BBTA expressed the important role played by BT in letting them understand the negative effects of Mercury, and for leading the way for their conversion into GCM.

2. *Relevance of target groups vis-a-vis achievement of project objectives*

The miners involved in the project (i.e., ASGM miners, ball mill operators / processors) are crucial in attaining the project objectives because they are the major users of Mercury in the project sites.

Civil society actors (women, children, youth) and LGUs (local leaders, environmental/ health officers) are likewise relevant in mustering the support of the larger community to increase awareness, advocate, and work for the adoption of Mercury-free method. On the part of government officials and health workers, they play a significant role in the formulation and implementation of policies to eliminate Mercury use, and even in educating miners and households on the dangers of the chemical.

In general, civil society and local leaders provide additional pressure for miners to shift to non-toxic method of extracting/processing gold.

The women/mothers and the youth are proven effective agents of information dissemination especially in the family. Both mother and child have worked together in convincing male members of the family who engage in mining to adopt safer method.

3. *Project's relevance in strengthening policy advocacy for ASGM in the country*

The project has generated various media releases, taking advantage of quad-media (radio, print, TV, and Internet) in disseminating information on the need to shift to Mercury-free GCM.

It has provided vital policy inputs for the Technical Working Group of the Philippines on ASGM and the National Steering Committee to facilitate effective implementation of the National Strategic Plan for the Phase-Out of Mercury in ASGM in the Philippines (2011-2021), and EO 79 (*Institutionalizing and Implementing Reforms in the Philippine Mining Sector Providing Policies and Guidelines to Ensure*

Environmental Protection and Responsible Mining in the Utilization of Mineral Resources). In addition, it has helped identify the policy gaps of EO 79, which need to be addressed to strengthen policy enforcement on the ground.

Moreover, the project has provided the needed advocacy work to help support the country's ratification of the Minamata Convention—an international treaty designed to protect human health and the environment from anthropogenic emissions and releases of Mercury and Mercury compounds.

Through the project's publications, researches, IEC materials, and constant lobbying with LGUs and different government agencies (e.g., MGB/DENR, DOLE, DOH), the government has slowly started to give especial attention to the plight of ASGM miners in the country. It is important to note that although ASGM mining has been existing for several centuries in the country, it is only in the recent years that support is being planned for them by the government, e.g., alternative livelihood, integration of the dangers of Mercury use into the government's health programs/activities.

4. Project's relevance to the country's goal of eliminating Mercury use

The project has provided concrete experiences and lessons learned about use of Mercury-free methods (i.e., GCM) in its three (3) project sites.

Its experiences have validated the importance of strategic alliances with and engagement of vital stakeholders both in the government and civil society sectors to help miners adopt Mercury-free GCM. They also provide concrete lessons for the up-scaling of the implementation of the government's 10-year National Strategic Plan (NSP) on Mercury use elimination in ASGM.

Considering the government's scarce resources in implementing the NAP and EO 79, the project has provided concrete data on the do-ability of implementing Mercury-free methods in ASGM areas.

The project has likewise given vital inputs to various fora based on concrete experiences it has gained in its project sites through its advocacy efforts and representation to various policy-related meetings at the regional, national, and international levels.

B. Effectiveness

After reviewing BT's/Diálogos' reports about the project and conducting FGDs and KIIs with different stakeholders/target groups in the project sites, the evaluation team has identified the following notable achievements:

1. Raising people's level of awareness in the project sites not only among miners but also among other stakeholders (e.g., women, youth, BHWs, government officials) about the dangers of Mercury and its negative effects on health and environment. Their awareness has yielded the following positive results:
 - a. Desire to clean up their environment, particularly in the case of Gaang;
 - b. Actual conversion into Mercury-free method in Gaang and T'boli, although with varying degrees of reduction, numbers of miners practicing GCM, and facilities that are already Mercury-free.
 - c. Reduction in the levels of Mercury released to the environment due to a number of miners' conversion to non-Mercury technology in South Cotabato.
2. Raising the issues about the plight of ASGM miners at both national and local levels through various media and project reports, direct and continuing engagement by BT with different government offices (e.g., DENR/MGB, LGUs, MHOs, BHWs, MENROs/ PENROs, and lawmakers), which have paved the way for the government to act on them, e.g., provision of alternative livelihood; local policies to help facilitate the application for *Minahang Bayan*, particularly in Camarines Norte and South Cotabato.
 - a. There are now three (3) Department of Labor and Employment (DOLE) registered ASGM associations working on their application for *Minahang Bayan* in Jose Panganiban. Two (2) of these associations already got their consent for twenty (20) hectares each from large-scale mining companies that have mining permit over their applied areas. Consent is a crucial requirement in the application for *Minahang Bayan*.

- b. DOLE has approved an Alternative Livelihood Project for Displaced Small-Scale Miners of Labo, Paracale, and Jose Panganiban (Kabuhayan or Livelihood Project) in the amount of P4 million, which will be awarded not later than August. About 1,300 ASGM miners will benefit through the provision of Livelihood Starter Package, which is P20T-worth of tools for different kinds of jobs (e.g., carpentry, fishing, welding, food processing, etc.) depending on miners' skills. While waiting for the release of the Starter Kit, DOLE will give emergency employment to those that badly need them. Emergency employment will be in the form of labor for ten (10) days. Five hundred (500) miners have been identified to benefit from this. Beneficiaries will work under the Clean and Green Program—cleaning rivers and coastal areas and planting trees.
 - c. The province of Camarines Norte has drafted an ordinance on Provincial Mining Clearance with the intention to provide venue/opportunity to require large-scale mining claimants in the province to allocate a portion of their claimed area for *Minahang Bayan*.
 - d. The project has helped in generating more initiatives to complement the present activities in the project sites, e.g., projects to address labor and health-related concerns and issues on technology (DOST, DOH, DSWD, UNIDO, US-DOL, ILO).
3. Development of local technical miner trainers who have become resource persons at the local and international trainings.
 4. Formation of women, youth, and miners groups that are crucial in sustaining the project's advocacy gains.

Strategies have been evaluated and adjusted accordingly during the project implementation period based on periodic feedbacking between Diálogos and BT.

Considering the enormous challenge to change the behavior of miners—who are accustomed to using Mercury—to shift to Mercury-free GCM during the project timeframe, BT re-strategized its efforts from elimination of Mercury use towards reduction, particularly in Jose Panganiban, Camarines Norte, although the goal of Mercury elimination was unchanged.

In T'Boli, South Cotabato, as a stepping stone, the objective is to stop whole ore amalgamation which may reduce Mercury use up to 80%.

Out of the 75-80 registered ball mill operators and processors in T'Boli, about 70% have already reduced their Mercury use from 20 grams/per drum to only 3 grams. This is because they have innovated by using Mercury only after their ores are pulverized and poured into a basin. In the past, miners had a wrong perception of using a lot of Mercury to extract gold from crushed ores. This wrong perception has slowly been corrected in the past three (3) years. Momentum needs to be sustained to attain a critical mass of miners and ball mill operators / processors who will not only reduce Mercury use, but will also eliminate the same in the long run.

Notably, the pressure from LGU has also played a pivotal role in urging miners, ball mill operators, and processors to reduce their Mercury use and to look for alternative Mercury-free methods for their gold extraction.

1. ***Project outcomes commensurate with original or modified project objectives***

Refocusing the project objective from Mercury use elimination to reduction is a sensible strategy, particularly in Camarines Norte, in view of the the limited project timeframe and the enormous challenge to change the attitudes and behaviors of miners to shift from Mercury method to GCM. Forcing the idea of elimination might be counter-productive since BT is still gaining the trust of the community and mobilizing support and “buy-in” of various stakeholders in the municipality.

2. ***Stakeholders' perception of quality of outputs***

In T'Boli, South Cotabato, the interviewed ASGM miners, ball mill owners, processors, women, youth, and LGU offices (health and environment) generally noted the important contribution of the project in increasing people's awareness on the negative effects of Mercury on both health and environment.

Civil society actors as well as government officers (health and environment) have been very receptive about BT's project in the area. For ASGM miners and ball mill operators / processors, the project initially encountered negative reactions. Nonetheless, through constant IEC work, dialogues, meetings, and

advocacy, they have started to accept the idea of Mercury-free GCM, although expected changes in attitude and behavior are still areas for improvement.

In Jose Panganiban, Camarines Norte, civil society actors and government officers (health and environment) have welcomed the Mercury-free project. In the case of miners, however, the evaluation team gathered mixed reactions. To illustrate, miners who participated in the trainings on GCM in Barangay Luklukan confirmed that the method has higher gold recovery. However, they also mentioned that GCM is quite laborious and time-consuming, and may not be effective in extracting gold from low-grade ores. On the other hand, in Barangay Sta. Elena, there seems to be a wrong perception among miners to use more Mercury if their ores are high-grade.

While there are miners who expressed their willingness to shift to Mercury-free GCM in Jose Panganiban, there are also several who are ambivalent about the method. Based on their stories, they are still able to extract more gold using CIP from ores originally processed using GCM. Possibly, the negative effects of miners losing faith in the GCM in Phase 1 (due to reduced gold yield) still has ripple effects up to now.

3. Targeted beneficiary groups actually reached

Civil society organizations (women, youth, and children) as well as health and environmental agencies (municipal and provincial) have been involved to expand the reach and impact of the project in terms of IEC work and advocacy in both T'Boli and Jose Panganiban.

Annex 5 summarizes the number of ASGM miners, ball mill operators, and processors actually reached in both municipalities.

Mobilizing and convincing subsistence ASGM miners to participate in the trainings was a challenge, particularly in Jose Panganiban, considering that these miners need to earn their living every day, and hence, might have considered the trainings as "opportunity cost" in terms of lost income for the day if they would join the trainings.

4. Catalytic or replication actions the project has carried out

In T'Boli, South Cotabato, conversion of several ASGM miners and ball mill operators into GCM is still on its initial stages. Hence, its catalytic effects in its surrounding areas have yet to be seen.

In Jose Panganiban, Camarines Norte, due to the migratory nature of ASGM miners, it is possible that acquired learnings on Mercury-free GCM may have already been shared with other miners in the surrounding areas, although actual adoption of GCM may still be unlikely.

In Pasil, Kalinga, some miners from Gaang did some initiatives to share their knowledge (e.g., BBTA Vice Chair Edwin Paganao opened a tunnel in Pasil and required his miners to use Mercury-free GCM). However, the use of the method was not entirely sustained as some miners in the area smelt their gold in Tabuk, which provides option to miners who still use Mercury.

5. Extent project partners have been able to draw benefits from new opportunities arising during project implementation

The project has endeavored to take advantage of opportunities to help attain its objectives.

As discussed earlier, it has tapped DOLE to provide livelihood projects to miners in Jose Panganiban. This effort to work with DOLE is geared towards the possibility of having livelihood alternatives which the miners may want to consider as their additional income sources.

For women miners, the series of GAD trainings were crucial in strengthening existing women's organizations and representation on ASGM issues.

The community became open in discussing other local issues that intertwine with ASGM, such as child labor, which used to be a hidden or covert reality. This openness to such issue is one reason why the communities in T'boli, South Cotabato and Camarines Norte are currently working with the ILO on child labor issues and other concerns pertaining to working conditions.

With regard to health issues, the community has become open in identifying problems that emanate from other local economic activities, such aerial spray in Barangay Desawu, T'boli, South Cotabato. Since the community has learned about the dangers of Mercury use, its members have started inquiring on the

effects of aerial spray on health and their vegetation. This reflective stance also conditioned their realization that it is important to gather data (e.g., stories, photos) as basis for their complaints which they can channel or present to the LGU. This means that the community has learned about the relevance of working with the LGU in addressing local issues.

The detailed status of accomplishments vis-a-vis logframe is included in **Annex 5**.

C. Efficiency

1. Use of resources and cost-effectiveness

Planned activities were conducted and target outputs were delivered within allocated budget, such as production of resource materials, conduct of trainings, one-on-one coaching sessions, lobbying, learning visits involving key government officials (politicians, government employees including municipal doctors) towards developing local champions in the government.

Having lean staffing has kept the staff cost low. To ensure that targets would not be affected, the setup was complemented by short-term consultants and development of miners as local expert trainers, which turned out to be cost-effective and efficient than having an outsider trainer. It was easier to handle having few full-time staff, according to the Development Program Manager. What matters most is the competence and dedication of each staff considering that they are prone to Mercury exposure.

It is clear that the management is cautious in using project resources, and demands accountability from each staff.

BT was able to leverage project funds and was able to generate P20,000 (USD900) of support from the LGU of South Cotabato for the first round of miners' consultation.

The project's budget utilization has been closely monitored and reported in the quarterly progress report. What was appreciated by BT for this project is the openness to realign the budget based on the changing condition on the ground for as long as it is reasonable and justifiable. As of March 2017, almost 83% of the fund for project activities was already utilized. The remaining 17% was used to implement the rest of the target activities for the last quarter. Savings were made because of the cancellation of the project in Gaang, and also because the project tapped a local miner expert, particularly in South Cotabato, instead of an outsider. The only budget item in the activities that exceeded the approved budget is local transport under organizational M&E. However, the variance was only 5% which is generally an acceptable amount among funding agencies.

2. Project results vis-a-vis timeframe

The project was able to finish within the given timeframe of three (3) years, with few months extension for report writing at no additional cost.

In terms of outcomes, improvements in learnings have been significantly attained within the project timeframe because of the extensive IEC and advocacy work of BT in T'Boli and Jose Panganiban. Application of these learnings were observed from miners/ball mill owners who have become resource persons, those who invested in new Mercury-free facilities and helped others to shift to safer method of gold extraction and processing.

Changes in medium-term outcome (*adoption of Mercury-free method*) and long-term outcome (*changes in health and environmental conditions*) have yet to be fully realized. In T'boli, South Cotabato, several ASGM miners, ball mill operators, and owners are already in the process of shifting to Mercury-free method; hence, medium-term and long-term outcomes are expected to spill over beyond the project timeframe because of the project's long gestation period.

D. Impact

1. Project outcomes in terms of learnings of project beneficiaries (short-term), actions (medium-term), and conditions (long-term)

In general, ASGM miners and ball mill operators / processors in T'Boli, South Cotabato have improved knowledge, awareness, and opinion on the negative effects of Mercury use on both health and environment. Areas for improvement are their attitudes, skills, aspirations, and motivations to shift to

Mercury-free method. The project is still gaining momentum to attain significant changes in the action, behavior, and practice of miners.

Prior to 2010, hydraulic processing using Mercury was common in the upstream areas of Barangay Kematu, T'Boli. With the increased knowledge on Mercury toxicity, the LGU has banned such practice, thereby resulting in improved river quality and lesser incidence of diseases (e.g., reduced cases of skin diseases among children, reduction in number of miners with Tuberculosis). According to women's organization interviewed in Kematu, since 2014, the water quality in the river has improved (e.g., no longer brownish in color). At present, locals in the barangay already fish along the river, use the water for washing their laundry, and their children are already bathing in it. This was attributed by the FGD participants as a long-term impact of the project in their area. Improved awareness and policy enforcement on Mercury have improved the water quality of their rivers.

Annual monitoring of Mercury levels along Kematu River has been conducted to check if it is contaminated with the chemical.

At present, Mercury is being used only downstream in the processing site identified by the LGU.

As a result of the Mercury monitoring study (using Lumex) conducted in the municipality, majority of the ball mill operators and processors have already been relocated by the LGU to a new processing zone away from the residential areas.

In 2012, there were only four (4) ball mill operators and processors registered with the LGU. Because of the LGU's efforts to regulate them, about 70-80 of them have already registered in the recent past. Out of the 70-80, only eight (8) have not yet relocated to the processing zone.

In Jose Panganiban, Camarines Norte, the project has successfully increased the awareness of a huge portion of the population on Mercury toxicity. However, the initial months of IEC and advocacy work were met with resistance by miners who are used to Mercury use.

According to the MENRO, at least 10% of ball mill operators and processors are already applying CIP in Jose Panganiban. Trained ASGM miners have learned how to extract gold using Mercury-free method (e.g., gravity). Nonetheless, acquiring a Mercury-free facility is a constraint. Converting a Mercury facility into GCM will cost an ASGM miner about P5,000; on the other hand, the cost of conversion into CIP is about P180T, which can be afforded only by well-off ball mill operators and processors.

Miners interviewed in Barangay Luklukan, Jose Panganiban, said that they need a small Mercury-free facility that can process five (5) sacks of ores.

In Gaang, Kalinga, Mercury is already totally banned. Marshalls continue in their monitoring activities; violators are fined P25,000.00 and expelled from the mining site. Moreover, since 2014, there has been zero case of Mercury in the area, except for one case of confiscated Mercury at the Golden Gate Station in which 50 grams of the chemical were confiscated. From the time the ban was implemented, some miners have surrendered old stocks of Mercury especially from store owners. No penalty is imposed if the chemical is voluntarily surrendered.

The Gaang community is thankful to BT for letting them understand Mercury toxicity, and for leading the way for their conversion into GCM.

Only about about 5% of Gaang miners bring some of their processed ores to Tabuk City and use Mercury offered by gold-buying stores and stations. Several of them sell their old Mercury stocks to other mining sites so that they can partly recover their capital. The BBTA recognizes the need to further strengthen the campaign to these miners and to work with the provincial government on Mercury ban, particularly among gold buyers in Tabuk City.

2. *Generation of results that could lead to changes of assisted institutions & unplanned impacts*

The project has generally increased the awareness of miners, ball mill operators, and processors on the impending ban on Mercury use and about the ill effects of Mercury use.

In T'Boli, South Cotabato, there is an apparent shift among processors to use Cyanide-in-Pulp (CIP) method to extract gold from ores. A big processor visited in the site has already constructed a Mercury-free facility that can implement both CIP and GCM if Mercury is totally banned. Total cost of conversion is P150,000 for Mercury-free ball mill processing facility, and P250,000.00 for CIP. According to her, the

facility can process ten (10) tons of ores. At present, she said that there is a need to help small-scale ball mill operators and processors to set up a CIP that can process only five (5) tons of ores.

3. **Potential longer-term impacts of the project**

Potential longer-term impacts of the project are the sustained learnings of the people in the project sites due to the information dissemination efforts of community partners, like women, youth, children, teachers, and health workers.

a. **South Cotabato**

In T'Boli, the children and youth have enthusiastically shared their learnings with their family members, friends, and neighbors. They have conducted IEC campaigns in three (3) schools located in mining areas, targeting young children/students, out-of-school youth, and young miners. They have also adopted one (1) local community for their IEC campaigns and advocacy work, and took part in the conduct of a local summit on Mercury. Currently, their organization (Batang Bantay Toxics or BBT) is planning to reach Desawo, a far-flung mining area in the municipality.

The following project impacts on BBT have the potential to be sustained in the long term:

- Improved level of knowledge/learnings about the negative effects of Mercury use and other harmful chemicals (fearsome five – lead, mercury, cadmium, asbestos, and arsenic – and pesticides) on both health and environment in particular, and about environmental protection in general;
- Dissemination of information to family members, relatives, neighbors, and friends;
- Membership in Youth Task Force in barangays have enabled them to become active youth leaders in conducting “echo” sessions;
- Increased confidence on the part of members to share their learnings with others (e.g., public speaking during fora);
- Cooperation among members in doing their IEC and advocacy work; and,
- Commitment to sustain IEC campaigns and advocacy work after the project.

Aside from their Mercury-free advocacy, BBT has also organized other environmental activities, such as tree planting, with the support of BT, Parents-Teachers Association (PTA), and the Allah Valley Protected Landscape. At present, it needs assistance in mobilizing support for its environmental initiatives, networking and partnership, and engaging local authorities (e.g., LGU) to support its planned future projects.

As to teachers' training, seventy (70) teachers were trained by both BT and DENR on Mercury toxicity and on alternatives to Mercury in ASGM. Expectedly, they have become important partners in sharing knowledge and information with their fellow teachers and in integrating their learnings into their lectures. Linkage is being initiated with the Department of Education (DepEd) to expand the training program to other schools in the municipality. On 07 July 2017, there was a scheduled meeting with DepEd to replicate BBT in other schools, and possibly to integrate lectures on Mercury into school curricula/subjects.

On health workers' training, seven (7) municipal health workers were trained on Mercury toxicity, referrals on treatment, and advocacy. As a result, they have disseminated information to their patients as well as miners / processors during their conduct of inspections. In terms of multiplier effect, they have integrated their learnings into seminars they are conducting for the local midwives and barangay health workers (BHWs).

Interviewed women have shared with their family members, neighbors, and other community members their knowledge on the negative effects of Mercury use. They said they will continue to share their learnings even after the end of the project in their municipality.

b. **Camarines Norte**

The lone municipal doctor has incorporated Mercury-free IEC and advocacy into the *Buntis Congress* the Municipal Health Office is holding periodically in the twenty seven (27) barangays in Jose Panganiban. BHWs are active in disseminating information to their constituents.

Interviewed BHWs have taught people in their respective purok (small village) to avoid using Mercury and, if they have to use the chemical, they need to handle/store it properly, wear mask when using it, and ensure that they do not have any open wounds.

On the other hand, the BBT in Jose Panganiban, which presented a play entitled “*Laruang Lason*” (*Toxic Toy*) during the children’s month celebration in 2015, needs to be sustained in order to reach out to more youth and children in their locality.

c. Kalinga

In Balbalasang, Balbalan, the community has broadened its commitment to a Mercury-free environment by aiming to be “toxic-free.” Referring to the fearsome five toxic chemicals, the school in Balbalasang (Saint Paul’s Memorial School of Kalinga, Inc.) has begun using LED lights. Interviewed local school officials said they have integrated lectures on Mercury into their subjects (e.g., science and values) where they also discuss other toxic materials, such as lead, plastics, etc. Such initiatives are part of the school’s effort to instill among their students the aim of not just making their school Mercury-free but also toxic-free. Aside from planning to create a student organization that will specifically address Mercury issues, the school is also set to write a school policy on Mercury ban, which will be discussed during assemblies of the Parents-Teachers Association (PTA). Recently, it has banned the use of apparatuses containing Mercury (e.g., thermometer and blood pressure devices).

1. Achievement of intended impacts

The attainment of short-term impacts in terms of learnings of target beneficiaries have been achieved by the project in both T’Boli and Jose Panganiban.

As to medium-term impact, initial stages of conversion have already started in T’Boli. However, in Jose Panganiban, the project is facing challenges due to various factors, such as attitude of miners, lack of LGU support, insufficient capital and facilities to help support ASGM miners to shift to GCM.

2. Unintended and negative impacts

As a result of increased awareness on the negative impacts of Mercury on both health and environment, and considering the impending ban of Mercury (particularly in T’Boli, South Cotabato, which is a *Minahang Bayan*), several ball mill owners and operators have already shifted to Cyanide-in-Pulp (CIP) method. In some way, this shift can be considered an unintended impact of the project.

It is important to note that both Diálogos and BT do not recommend the use of CIP and are only advocating and capacitating ASGM miners on GCM using Borax which is much harmful to people and the environment in comparison to mercury; but no chemical is completely harmless.

3. Positive / direct and indirect impacts

Diálogos summarized the top three (3) direct impacts of the project in South Cotabato and in Camarines Norte, as follows:

Table 1. Comparative Impacts in Camarines Norte and South Cotabato

Major Impacts in South Cotabato	Major Impacts in Camarines Norte
<ol style="list-style-type: none"> 1. There are now Mercury-free milling facilities operating in the municipality. 2. A strong alliance with DENR that will keep on working for Mercury-free gold mining. 3. An apparent reduction in Mercury use among ball mill operators. 	<ol style="list-style-type: none"> 1. Knowledge about Mercury toxicity and the emerging disaster (pollution of the bay) was gained by many individual stakeholders. 2. A group of peers was gathered that can potentially sustain the advocacy against Mercury pollution. 3. The mobilization of youth may in time change public attitude.

On the part of BT, it has identified the following major project results:

1. Surpassing challenges encountered during project implementation and learning from them, i.e., enabling BT to be more creative in its implementation strategies.
2. The situation is so different now compared with pre-implementation period. BT has slowly gained the respect and trust of ASGM miners and LGUs. It is now treated as their significant partner in elevating the plight of ASGM miners in the project sites, especially in helping them have dignified work (i.e., safe, legal, appropriate).
3. BHWs are now able to articulate what they have learned in the series of IEC activities and trainings given to them.
4. Government officials and doctors appreciate what the project has done in their area.
5. Major gains are the seeds/foundations towards project sustainability. For instance, the project was able to produce/develop local technical miner trainers in the three (3) project sites—a very important result in ensuring project sustainability even without BT's and Diálogos' support.
6. The project has paved the way for the formation of a national coalition of ASGM miners, which is crucial in sustaining the advocacy component of the project (e.g., legalization of more ASGM associations and their aspiration for a *Minahang Bayan*, which will give them a form of security in their livelihood as they will no longer be considered illegal).

In terms of indirect impact, the proposed ordinance on Provincial Mining Clearance of Camarines Norte³—which is now on its 2nd reading and undergoing continuing consultations/ committee hearings—can be attributed to BT's engagement with the provincial LGU. BT was instrumental in the crafting of the proposed ordinance because the provincial officials got the idea from Governor Fuentes of South Cotabato during their learning visit to T'boli, which was facilitated and sponsored by BT.

In Balbalan, Kalinga, the Municipal Health Officer (MHO) said that an indirect impact of BT's project in the area is that apparatuses containing Mercury (thermometer and blood pressure devices) are no longer used in their municipality. The banning of these instruments were also done in a local school in Balbalasang, Balbalan where 80% of the residents are miners in Gaang Mines. The prohibition of Mercury-dependent thermometers and Blood Pressure (BP) apparatuses occasioned inquiries from locals and students which facilitated discussions on why Mercury should be banned in the locality. The MHO in-charge likened the new thermometers and BP apparatuses to new IEC materials on why Mercury should be banned.

From the provincial level, the PENRO attributed to BT its realization that the province should have a clear pollution and waste program. Although this program needs to be studied, the immediate commitment of the office is to conduct regular trainings on Mercury-free methods and lectures on Mercury toxicity, especially with Pasil miners who are largely still using Mercury. By having the Gaang miners as their trainers, the PENRO is replicating BT's peer-to-peer approach to help miners in Pasil abandon Mercury use in the mining community.

E. Sustainability

1. Analysis of constraints/risks in project implementation & mitigating actions

The project proposal took into consideration risk management, particularly “discussion between the partners on how to better prepare the field staff in working in often high-risk gold rush areas, surrounded with armed guards, toxic chemicals, and often poor access to modern means of communication.” Nonetheless, the pull-out of the project from Kalinga, revealed its shortcoming in fully assessing other forms of risks and managing the same. There are definitely risks and benefits of hiring someone from within as a staff especially if such person is a relative of an official of the PO partner in the area that happens to be an IP group which is very protective of each other. A work-related decision affecting a kin can be taken personally by the group.

³ The Provincial Mining Clearance ordinance is the province's subtle way of requiring the big mining companies to give their consent to small-scale miners associations' application for a *Minahang Bayan*, which are under their large-scale mining permit. The consent means the company will give a portion of their mining claim to the small-scale mining association application for a *Minahang Bayan*.

Ostensibly, the cancellation of the project in Kalinga were brought about by various factors, such as the death of the BBA leader which led to change in the structure and leadership in the area, as well as BT's decision to terminate the employment of its local coordinator due to her poor performance and dishonesty. The latter led to friction between BT and the local community since the local coordinator sought the sympathy of the indigenous community of which she is a part. During one of the field monitoring activities of BT's program director in the area, she was illegally detained and harassed by the sympathizers of the dismissed coordinator.

While the project considered mitigating measures on safety and security, the local situation in Kalinga led to aggravation of condition for BT's project staff, which eventually pushed the NGO to pull the plug on the project in the area.

In Balbalan, Kalinga, a key informant interviewed said that BT's disagreement with the community stemmed from the National Commission on Indigenous Peoples' (NCIP) requirement on human blood sampling to determine Mercury levels, adding that the organization should have passed through this agency. He also emphasized the importance of having a formal terminal project report for the area. BT was protected by a Memorandum of Understanding (MOU) with the IP group for this project. It followed its commitments as stipulated in the agreement. In the September 2015 progress report, BT mentioned that coordination with NCIP and BBA leaders should be prioritized for the issuance of a "free, prior, and informed consent" validation and processing for the Borax bio-monitoring study.

Since the unexpected end of BT's project with the BBA and Gaang Mines, the local school and community think that there could have been a better way of ending the project so the community can also come up with a plan on how to sustain BT's advocacy for a Mercury-free environment.

In Jose Panganiban, Camarines Norte, a major challenge in project implementation is the migratory nature of miners. ASGM miners are mostly subsistence and move from one area to another in search of more gold. Inviting these ASGM miners to attend trainings is an "extra challenge" on the part of BT's project team because these miners have to prioritize earning income for the day. Considering this constraint in project implementation, BT acknowledged that community organizing approach among miners in the area is not a very effective method. Hence, BT has refocused its efforts on peer-to-peer mining and on coaching strategies.

Another identified constraint in the area is the lack of cheap and accessible gravity-free facilities so that trained miners can put what they have learned into practice.

Diálogos identified the following top four (4) constraints encountered in attaining the project's target outputs and outcomes:

1. *GCM requires more work (e.g., panning) and the extra gold gained is difficult to observe for the individual miner as the gold content of ore varies.* – To illustrate, one (1) sack of ores can produce one (1) gram of gold; in some instances, it will yield nothing. Some days, a miner can get a fair amount of gold; other days, almost nothing. Therefore, an improvement of 20% in gold yield is not easy to acknowledge, and if a miner gets less gold than expected for a few days, he may well return to the well-known amalgamation method (e.g., Mercury).
2. *Financial situation of miners* – If the financial situation of subsistence miners is bad, changing is a big decision since testing a new method will affect their daily income.
3. *The drum problem* – A rod mill drum that has been used with Mercury has to be cleaned before it can be used for Mercury-free processing. Many miners are of the perception that the cleaning is difficult and takes time. If this is not done, the Mercury coating inside the drum will absorb the gold in the ore being processed. Thus, a miner can either keep on processing until the Mercury coating is saturated with gold (in this case, the drum will work fine with the Mercury-free method after some millings) , or buy a new drum. In both cases, the miner has to be very careful not to contaminate his drum with Mercury again. However, the miner trainers in the project like Nono and Leoncio do not consider the cleaning of the drum a problem.
4. *Competing problems, like child labor, drug use, tunnels without support systems, etc.* – Mercury is only one among many occupational hazards in the project sites. Since the symptoms of Mercury poisoning are subtle in the individual miner, and the more severe problems with developmental delay in children are not always easy to relate to Mercury use, the incitement to change practice is not strong.

2. **Project sustainability in terms of technical, organizational, financial, maintenance aspects, as well as ownership of project beneficiaries**

Diálogos’ report on “Mercury-Free Small-Scale Gold Mining: Report from Project Monitoring Visit in the Philippines 2017,” indicated the following updates on project sustainability:

Table 2. Updates on Project Sustainability

South Cotabato	Camarines Norte
<p>Ban Toxics has created a sustainability plan together with the South Cotabato Province. However, they need to be decided on a set timeline for the goals. The province wants more time to phase out Mercury than is realistically available considering the announcements from the national level of government. The Diálogos team suggested to Ban Toxics (together with the provincial government) to add a timeline to the sustainability plan. This would hopefully show the national government that serious and precise actions are being taken to be Mercury-free in case the DENR starts monitoring.</p>	<p>The recognition of Jose Panganiban as a <i>Minahang Bayan</i> is seen as a crucial factor in the conversion of miners and in the sustainability plan because this will enable the local government to legislate and supervise the ASGM industry. At present, the LGU cannot do so because of the legal grey zone that ASGM is in. Ban Toxics will continuously help miners with the application, as well as push and guide the provincial government in getting the <i>Minahang Bayan</i> status.</p> <p>Encouraging miners to stop whole-ore amalgamation could be a stepping stone towards complete Mercury-free mining.</p>
<p>Ban Toxics will continue to strengthen the local community by supporting and empowering the local stakeholders.</p> <p>Suggestions for the sustainability plan are the following:</p> <ul style="list-style-type: none"> • Ban Toxics will work towards getting the province and municipal LGUs to clarify targets, timeline, and responsibilities, to adopt and ratify the sustainability plan, and to decide on budget. • Include sluice box construction in the miner-to-miner training. 	<p>Ban Toxics has been working together with the Department of Labor and Employment (DOLE) in forming miner associations. Forming and registering associations are crucial for miners in order for them to be able to apply for government funding for equipment for the Mercury-free transition and livelihood projects, and to be acknowledged by the government as legitimate miners.</p> <p>In addition, Ban Toxics has together with Japanese scientists and the governmental institute of science started a project where they, through geo-mapping, environmental sampling, and bio-monitoring, will locate mines, processing plants, rivers, and farmland, and possible polluted areas. The report is expected to be finished within the 1st quarter of 2018, and will be shared with the local government to raise awareness on severe pollution in the area.</p>

The sustainability plan for the project sites needs to be institutionalized and carried out to nurture the initiative and the positive changes the project has engendered the past three (3) years.

In terms of strategy, BT has adopted peer-to-peer and coaching approaches, coupled with advocacy work and LGU directive (particularly in T’Boli, South Cotabato), to help miners shift to Mercury-free GCM. This strategy has somehow facilitated a new found sense of ownership among key players in the project site. For instance, in T’Boli, a ball mill operator and processor has helped eight (8) other small processors acquire Mercury-free facilities. According to her, she was motivated to help as a PMRB mining representative. The only agreement she has is for the eight (8) small processors to process their ore residues at her CIP facility. The cost of ten (10) tons of residue ores is P30,000, including pick-up cost.

Considering that funding of the transition period—where the usual production has to be stopped as the drums have to be cleaned, sluices built, etc.—is a crucial concern for the transition to Mercury-free method, the provincial government of South Cotabato has a program to help sustain BT’s initiative as the governor is very supportive. According to PEMO, the provincial government is now looking into the possibility of implementing a “convert now, pay later” scheme. As suggested by miners in their meeting

last 30 June 2017, the municipal LGU was asked to come up with a similar scheme payable in five (5) years. The suggestion is still on the drawing board at the moment and requires persistent follow-ups to ensure sustainability. It is important to note that accessing financial support from the provincial government requires a lot of time and effort since project proposals will have to go through its long and arduous bureaucratic processes.

In South Cotabato, the percentage distribution of taxes collected from the *Minahang Bayan* is, as follows: 30% for the province, 40% for the barangay, and 30% for the municipality. A formula can be devised to help ensure sustainability in terms of financial and maintenance aspects.

Moreover, there is a need to look into the possibility of incorporating livelihood components into future interventions so that miners will have alternative sources of income if they decide to quit mining. For women interviewed in Barangay Kematu, T'Boli, they expressed the need to have support for farming (e.g., capital, seeds, and pesticides).

Learning from South Cotabato's *Minahang Bayan* experience, the LGUs of Jose Panganiban and Paracale have started to do their groundwork for the formalization of ASGM in their respective municipalities by processing their *Minahang Bayan* application. In April 2017, they prepared a petition to President Rodrigo R. Duterte and to the DENR secretary for the immediate creation of *Minahang Bayan* for ASGM miners of Camarines Norte. According to an officer of the women's federation in Jose Panganiban, groundwork was facilitated through collaboration with BT, municipal LGU, miners' association, and the University of the Philippines in Diliman. The application, however, has been pending for about six (6) years now due to rigorous requirements, such as getting the consent of landowners within the proposed area for the *Minahang Bayan*. According to MENRO, so far only two (2) companies have given consent, namely, Northern Island Builders and Blue Ridge.

Notably, Jose Panganiban has tapped the assistance of the Department of Science and Technology (DOST) and the University of the Philippines (UP) to construct a P36-million worth of Mercury-free facility in Barangay Sta. Rosa.

To sustain the Mercury-free initiative in the area and its surrounding municipalities, stakeholders need to be capacitated to develop project proposals and to access resources from various sources (e.g., national/LGU government, external funders, etc.) to implement Mercury-free methods. Oddly, the DOST/UP project is perceived by several key informants as lacking in bottom-up approach in terms of consultations with the mining communities. Hence, this concern should be taken into account in helping ASGM communities access resources for Mercury-free facilities in the future.

Co-financing can also be explored among municipal and provincial LGUs and financiers. According to a barangay official interviewed in Barangay Luklukan, Jose Panganiban, three (3) well-off processors in the barangay are willing to spend money to put up a Mercury-free facility.

In terms of advocacy, civil society organizations (women, youth, and children) need to be continuously tapped as they are very effective in disseminating information.

It is worth noting that the MENRO in Jose Panganiban was a former BT employee. Her employment in the LGU may be considered a positive spillover in the municipality considering that she is applying her acquired learnings from BT in developing environmental programs and projects for the municipality. Complementation of efforts between BT and the LGU has enabled the latter to focus on trainings for women and on livelihood activities. She considers the DOST/UP Mercury-free facility a major achievement.

The LGU of Jose Panganiban is also now initiating talks with potential partners in the private sector, government (DOST), and academe (UP - Department of Mining Metallurgical and Materials Engineering) to dredge the rivers and bay in the municipality. Other provisions being studied are revenue sharing (since Mercury to be dredged are expected to contain gold) and the commitment of the LGU to ensure that Mercury pollution will end after the dredging project.

In addition, the said LGU has incorporated a Mercury-free facility into its environmental program, although admittedly, it will soon welcome the construction of a coal plant in its locality, which is another source of Mercury pollution.

After BT's project in the area, the MENRO said that the LGU has no choice but to sustain the Mercury-free initiative as they are the duty bearers.

In Gaang, Kalinga, BBTA is open to continue its erstwhile partnership with BT and Diálogos and to open the communication lines among them. Its officers and members gave the following suggestions on sustainability:

1. Conduct seminars on occupational safety and health;
2. Use Lumex with GPS and camera to conduct regular sampling;
3. Construct a marker, with logos of BT and Diálogos, indicating that the site is Mercury-free;
4. Conduct periodic sampling and monitoring of Mercury in air, water, and soil with the end objective of attaining a Mercury-free environment;
5. Replicate BT's project in other surrounding areas as people already have increased awareness on Mercury toxicity; and,
6. Consider conducting body test to really see how much Mercury has accumulated in one's body (but they also stressed the need for consent on this).

On the other hand, BT finds it difficult to continue the same kind of project in Gaang because of the "protected area" status of the project site where mining is prohibited. BT plans to involve Gaang mines in the national coalition of miners, but is at a crossroad because Gaang remains illegal. Hence, for BT, Gaang needs to first resolve its issue of being part of a protected area.

The provincial LGU in Kalinga was inspired to come up with an intervention program to address issues on Mercury because of BT's past IEC work and advocacy campaigns. Its intervention program is now incorporated into its annual investment plan. At present, the said program has a budgetary allocation although still minimal.

In August 2017, the Environment and Natural Resources Office is set to conduct hands-on trainings on Mercury-free process which shall be handled by trainers from Balbalan. At present, it estimates around 2,000 miners in Gaang have already converted into Mercury-free GCM, with 3,000 more miners in Pasil who still need to be capacitated on the method. As to long-term sustainability, it opined that it still remains unclear. ENRO is hoping that BT will continue to work with them to ensure the trainings and conversion of miners into GCM.

In Balbalan, the Municipal Administrator, who was appointed to his post only in June 2017, said that his LGU will always welcome organizations like BT especially that they have advocacies to help protect and uphold the dignity of the environment.

3. *Issues and constraints that can impede project sustainability after its completion*

In T'Boli, South Cotabato, a major challenge is lack of capital on the part of ASGM miners to construct a facility for GCM. This constraint was validated by the evaluation team's interviews with barangay officials in Jose Panganiban, Camarines Norte. According to them, ASGM miners need to be provided facility for GCM so that they can apply what they have learned from the trainings.

Aside from lack of education and skills on GCM, another impediment is the attitude of many SSM miners who generally prefer to use Mercury because it is perceived to be less time consuming and laborious. A few miners interviewed in the site said they are too tired from their mining work; hence, they prefer to use the chemical because it is a quicker method. Ostensibly, poverty and "survival" mentality among subsistence ASGM miners affect their adoption of GCM.

Key informants interviewed in Jose Panganiban validated this information. Complicating the attitude issue are the vices of many ASGM miners in the municipality, such as gambling, drug addiction, womanizing, and splurging money in videoke and other pleasures.

Generally, Mercury is being used for high-grade ores. After using Mercury, the residue ores are then subjected to CIP for further gold extraction. Many poor ASGM miners said they use Mercury so that they will have immediate cash for the daily needs of their families. Certainly, changing the attitude of miners to shift to Mercury-free GCM takes time and effort.

In Barangay Sta. Elena, Jose Panganiban, Camarines Norte, an FGD participant said that financiers will benefit more if miners will use GCM since financiers can still extract more gold from its residue ores using CIP. Based on anecdotes in the barangay, Mercury is more effective in extracting gold from ores compared with GCM. Of course, these stories contradict BT's and Diálogos' data on effectivity of GCM.

In T'Boli, South Cotabato, about eleven (11) ASGM miners have bought sluice boxes from Nono Perez (a local GCM expert trainer) so that they can start with their own GCM. GCM is perceived to be a good

method in extracting gold from high-grade ore in the municipality. However, as earlier mentioned, ASGM miners are constrained by lack of capital, facilities, and technical skill. In practice, many still tend to use Mercury to extract gold from high-grade ores.

According to MENRO, 3-5 out of the 70-80 registered ball mill operators and processors have already converted into Mercury-free method. More technical trainings are necessary so that miners who have already converted will not revert back to Mercury use.

Observably, while ASGM miners like the idea of GCM, several of them, especially those who are cash-strapped, tend to sell their ores to buyers/processors since they need immediate cash for the daily needs of their families. Many others process their ores by renting ball mills that are contaminated with Mercury.

For some ball mill operators and processors, there is a perception that a major constraint of GCM is their inability to process large amounts of ores efficiently (e.g., 1 ton). The technology offered by BT seems to be apt only for subsistence ASGM miners and is not yet suitable to process huge volume of ores.

On the assertion/perception of some miners that GCM is not practical if they have more ores to process (e.g., 1 ton), Dialogos, however, notes that Nono and other miners in SC have demonstrated that the method can be used for any amount of ore, and that it can yield more gold compared with amalgamation techniques.

Another problem identified in T'Boli is the need to have a disposal facility for confiscated Mercury. At present, the Provincial Mining Regulatory Board (PMRB) does not know what to do with confiscated/surrendered Mercury in the locality. According to a key informant, a violator was once fined P4,000.00, but the confiscated Mercury was just stored in the cabinet of an LGU office.

Another key informant said that confiscated Mercury in the upland area of Barangay Kematu, T'Boli end up being brought to ball mill facilities in the downstream area where the processing zone is located.

In terms of policy enforcement, there is a need to improve coordination work with the Department of Environment and Natural Resources - Environmental Management Bureau (DENR-EMB) as it is the one in-charge of issuing Certificate of Conformity (COC). DENR-EMB needs to be tapped to intensify monitoring work, compliance, and enforcement.

In Balbalasang, Balbalan, Kalinga, interviewed key informants in a local school mentioned BT's exit from the area and the discontinuation of IEC and advocacy work on Mercury issues. According to them, only senior high school students are familiar with BT and its work at present; the younger children are no longer aware about the NGO and its work.

4. Possible risks to project outcomes that will affect continuation of benefits after the project ends & plans/strategies identified to minimize these risks

In T'Boli, South Cotabato, a major risk to project outcomes is the involvement of many municipal councilors in mining business. The local chief executive (municipal mayor) is also a stockholder of Tribal Mining Corporation, a mining company operating in the area. A draft ordinance to address the Mercury issue, prepared by MENRO, has not been acted upon by the local council due to conflict of interest. Ideally, if approved, the proposed legislation should have funding for enforcement.

According to MENRO, the province needs to play an active role in intervention at the community level, and that the LGU needs the province's support in terms of monitoring work—a tough task considering that Mercury is illegally and clandestinely traded.

Although the provincial government has deputized three (3) officers in the municipality to enforce EO 79⁴, these deputized officers need stronger support from the provincial LGU. At present, the municipal LGU is hesitant to implement EO 79 since it believes that the policy lacks enforcement and penalty provisions. The said EO does not supercede RA 7076 (People's Small-Scale Mining Act of 1991).

In terms of policy development, both the provincial and municipal LGUs in South Cotabato expressed the need for technical and legal assistance in crafting a policy that will have stronger teeth for enforcement. According to PEMO, political will and "iron hand" enforcement are necessary to reduce and to eventually eliminate Mercury use in the province.

⁴ Executive Order 79, Series of 2012: Institutionalizing and implementing reforms in the Philippine mining sector providing policies and guidelines to ensure environmental protection and responsible mining in the utilization of mineral resources.

In Jose Panganiban, Camarines Norte, policy development (e.g., adoption of LGU ordinance) may require a lot of policy advocacy work because, at present, local officials are not quite supportive in coming up with a local policy to address the problem of Mercury. A key LGU informant said that the government has a bias towards large-scale mining over ASGM; hence, applications for *Minahang Bayan* languish for years without being given appropriate support. Notably, the Implementing Rules and Regulation (IRR) for the *Minahang Bayan* came out only in 2015. At present, there are only about five (5) approved *Minahang Bayans* throughout the country.

Moreover, for as long as Mercury is available in abundant supply, there is always the possibility and enticement on the part of ASGM miners, ball mill operators, and processors to use it. Based on interviews conducted with ASGM miners who use compressor in mining in Jose Panganiban, they said that they are willing to be trained and use GCM if Mercury is no longer available in their area. Consequently, from a policy standpoint, the issue of supply should be addressed. Policy enforcers can be influenced to map out sources and be capacitated to come up with robust enforcement mechanisms to effectively cut off supply.

Incidentally, Diálogos is categorical on its position that cooperating with law enforcers and helping them find Mercury traders/users will make the project team members vulnerable and unwanted.

Based on interview conducted with PEMO in South Cotabato, the provincial LGU has recently adopted a policy of conducting inspection before renewing the business permit of ball mill operators and processors. Because many hide their Mercury and close their facilities during actual conduct of inspection, its head said that their license to operate will be revoked if they fail to cooperate and close their facilities three (3) times during inspections.

The use of Lumex technology is also being contemplated by the province for its inspection work. This new policy is expected to eventually force ASGM miners and ball mill operators / processors to do away with Mercury use.

In terms of LGU capacity, LGU employees tapped for the project (e.g., municipal health workers in T'boli) are overburdened with multiple tasks; hence, they have divided attention when it comes to their involvement in the Mercury-free project.

F. Project management

1. Project structure, management, and administration

Diálogos and BT shared responsibility in ensuring successful project implementation. BT took care of the direct day-to-day project management and implementation, policy research, advocacy, and Philippine and international media work. On the other hand, Diálogos was directly responsible to the donor. Its specific tasks include project monitoring and financial management, conducting technical trainings on health. Its team is composed of representatives from the University of Copenhagen and GEUS.

The local project team is composed of: a Chief Operations Officer (directly responsible for the project); a Development Program Manager (directly responsible for all practical matters related to project implementation—monthly planning, field work, monitoring outputs, strategizing, etc.); and, a Development Program Coordinator per project site (directly responsible in ensuring planned activities are conducted and that target outputs are delivered).

Considering the coverage of three (3) far-flung provinces, with lean workforce, managing the project has been quite a challenge especially that at the start, there was no M&E system in place yet. Nonetheless, the project has been handled properly as evidenced by its outputs and outcomes. The presence of a local technical expert, particularly in South Cotabato, has really helped a lot towards the achievement of objective 1.

The local coordinators had to multi-task and work double time as they also performed finance and administrative functions (e.g., preparation of liquidation reports, etc.) on top of their core functions (e.g., community organizing, coordination work, etc.).

While the project team has created synergies in implementing other complementary projects in helping ASGM communities, such approach has also created added responsibility and administrative tasks—although BT has welcomed the challenge so that it can better help the communities it is serving.

Quarterly assessment and reporting were regularly done by the project team. Quarterly progress reports were submitted by BT to Diálogos. Aside from day-to-day monitoring by BT's Development Program

Manager, field visits were also done by Diálogos' team to keep track of progress, make training sessions on Mercury toxicology, and discuss problems arising in each area.

On strategies:

The project employed the following combination of strategies: organizing, research, awareness raising, capacity building, policy advocacy, partnership building, and networking. The first three were used as entry point in the area before the conduct of capacity-building activities.

Training local experts is a good strategy as it cuts the time needed to establish rapport and to build trust with local communities, partners, and beneficiaries. A local trainer like Nono Perez and Solomon in South Cotabato and Kalinga, respectively, proved to be an efficient way of capacitating miners on GCM. On the other hand, there is no practicing local expert yet on GCM in Camarines Norte, which together with other factors, contributed to the slow adoption of the method in the area.

The production of trainers manual was also crucial in facilitating the conduct of more trainings on the use of GCM.

The introduction of miner-to-miner training or peer-to-peer training in the middle of project implementation was very helpful in developing additional local technical experts. This strategy was more effective compared with the usual general trainings conducted because of the follow-through or mentoring system after the training.

Getting the LGU's support as well as the formation of support groups/networks were crucial steps towards project sustainability—even in the absence of BT in the project sites in the future. The field visits and interviews with government officials and other stakeholders affirmed this—they will continue to work towards a Mercury-free environment.

On management issues and challenges/conflict management:

For a time, the project experienced communication problem with the Municipal Environment and Natural Resources Officer in Jose Panganiban who was once a BT staff. The strained relationship had affected project implementation as the MENRO had excluded BT from its activities and meetings with miners' association, and is saying differently about GCM. The said officer, being a public official, has a certain degree of influence on the people, including miners. In view of this, BT has pursued efforts to mend its relationship with her through constant dialogues until the issue was resolved. Currently, both MENRO and BT are working together again towards a shared goal of helping ASGM miners eliminate Mercury use in gold processing.

A different kind of conflict arose in Kalinga due to the termination of contract of the field staff assigned in the area. The main reason for the termination is poor performance according to the project manager; target outputs were not delivered and BT got a lot of complaints concerning the staff from its local partners in Gaang. The management did not want to compromise the attainment of the project's outputs and outcomes; hence, the decision to replace the inefficient and ineffective staff with a competent one. Unfortunately, the said management decision has resulted in project cancellation in Gaang because it was not accepted by the main local partner in the area. They took it personally, saying that the staff's reputation was compromised. The said staff is a relative of one of the officers of BBTA. As of this writing, there are still project equipment that are in the possession of the former staff—computer, LCD projector, and printer.

It was a complicated situation which provided lessons to BT in terms of work organization and strategy as well as M&E system. Based on reports, BT said it had tried several times to reach out to BBTA for dialogue and proper project termination and exit. However, based on the project team's fieldwork in Kalinga, key informants said that a final report from BT is needed so the BBTA—especially with its new set of officers—can better understand the context of BT's departure from the project site. On the part of BT, it said that it takes cooperation and openness of two affected parties to resolve the issues and concerns affecting them. BT has tried several times to reach out to BBTA by sending formal letter request for a dialogue, but its request was responded by a NO at that time, saying they are not yet ready for any engagement that would need their participation.

Given the two (2) points of view, it remains evident that a space is needed where both BT and BBTA can pursue a dialogical conversation. While the letter of the BBA to BT indicates the importance for BT to go through proper government agencies (which has been referred to as the NCIP in the field interview in Kalinga), and that BT also did its part in communicating with BBA to help address the conflict and misunderstanding between the two organizations, the status of the relation between them remains

unclear in the sense that both organizations commit to the value of having a Mercury-free ASGM in Gaang mines, and yet share that they may need to first bracket or suspend their working relation.

Towards the end of Phase 1, a major incident also happened in Baguio. Miner participants coming from different ASGM communities were robbed during a training there. BT had to pay around P500T for their lost cash and valuables. It took BT about a year to look for funds to help defray the cost of lost items; conversely, the participants were unsure for the entire year if they would get refunds for their lost items. In other words, at the start of Phase 2, BT had to work hard to regain the trust of miners for several months since the communities and LGUs of the participants were dismayed by the incident (e.g., it took the BT coordinator in JP one year to feel the trust of the community again). Internally, the incident produced rift among the staff and eventual resignation of some.

In addition, suddenly, the main resource person/trainer on GCM in Benguet did not want to engage with BT anymore. Hence, the project team had to re-strategize and prioritize the conduct of training of trainers (ToT) then later on modifying its ToT to peer-to-peer training, producing local technical experts who are now capable of conducting trainings on GCM locally and internationally.

2. *Extent the project has been able to coordinate its activities with other actors including the official health service and other NGOs*

The project was in constant communication with the respective health offices in the three (3) project sites. This explains, for instance, the active participation of BNS and BHWs in T'boli, South Cotabato, who after taking part in lectures provided by BT, decided to include discussions on the ill-effects of Mercury in their household visits in their assigned communities.

In Gaang Mines, the MHO officer visited the actual site in July 2015 to see for herself the state of Mercury non-use there. Recognizing the truth behind the claim that Gaang Mines is already Mercury-free, she plans to propose a bigger infirmary to provide lectures on occupational safety and hazards, and to provide medical assistance to locals with physical injuries. The same type of coordination has been with the health officers in Camarines Norte who have taken active roles in the lectures/trainings conducted by BT.

In relation to other NGOs, BT's current engagement with ILO is a good example on how its expertise on the ground can provide data for an international organization in its bid to help reduce child labor in ASGM and to improve working conditions in its project sites. The ILO, in this respect, intersects with BT's hope that the improved working conditions—such as access to safe water, proper training on health and use of tools, absence of Mercury and other toxics, and a harassment-free environment for women—will help prepare the community in their transition towards a Mercury-free and safe ASGM community.

With regard to other institutions in the project sites, BT has worked with the BBA of Gaang Mines, Kalinga, and its projects have been generally done in consultation with the Tribal Council. Since the BBA chieftain was the late Mayor Kenneth Dale Mangaoang, BT also worked well with the Provincial Office in Kalinga, and the Municipal Office in Balbalan.

In T'boli, South Cotabato, both the Provincial Offices (e.g., PEMO) and Municipal Offices (e.g., MENRO) have requested BT to take part in meetings that require NGO representation.

In Camarines Norte, BT has good coordination with the BHWs, and with the municipal doctor who admitted that because of engagement with BT for this project, they have already incorporated a special topic on Mercury during their *Buntis* (Pregnant) Congress every year. BT has started gaining the respect of its partner government agencies as evidenced by their ongoing engagement with the provincial government for its Mercury-free initiative in the area.

3. *Monitoring and evaluation (M&E) system*

Before the project was implemented, there was an absence of a clear M&E system and the baseline data were insufficient. Phase 2 has endeavored to address this gap by putting in place a workable M&E system, demanding concrete outputs from the staff, and requiring individual workplans and reports. BT recognizes the importance of having sufficient baseline information that will facilitate smooth project implementation that is backed with an effective M&E system, which will be helpful especially if the project will be replicated in other areas.

For Phase 2, due to resource constraints, the M&E function was built into the role of the project manager.

BT has realized that for future projects, covering several provinces/areas spread across the country will require a full-time M&E officer for more effective monitoring, evaluation, and reporting.

G. BT's Potential as NGO and for Future Projects

BT has demonstrated its commitment to help reduce and eventually eliminate the use of Mercury in ASGM in the country. The organization's presence, projects, and networks in the three project sites underscore its intent to assist and facilitate mining communities transit from Mercury-dependent habits to Mercury-free methods in gold processing.

Compounded by historical and social issues and the need to partner with local institutions and champions from the community, BT has honed its skills in dialoguing and working with the province, municipality, barangay, education sector, youth, women, and men. Realizing the breadth and intersectionality of ASGM, BT has developed its capacity in bringing the sectors together to rally behind a common cause—Mercury elimination in ASGM communities.

This feat has assumed various forms or expressions in the project sites, which has made BT realize that leading a community out of Mercury needs to be both contextual and participatory. This is a lesson that the NGO has learned as it has become creative and responsive to the various challenges that emanate from the workings on the ground.

Despite the setbacks, such as the closure of the project in Gaang Mines, Kalinga, BT has high hopes that the community which it has assisted will be able to stand on its own, and re-discover its autonomy in protecting the environment—which both BT and BBTA of Kalinga, for instance, have something in common.

The persistence of weak institutional formal structures in Jose Panganiban, Camarines Norte, was a concern for the organization. But this constraint has allowed BT to re-think its conception of mining communities specifically with the unique challenges that each mining community brings.

On the other hand, its work in T'boli, South Cotabato has produced small but meaningful successes in having Mercury-free processing facilities. Such accomplishment means that BT has communicated its key messages well, and that the people in the community have started reflecting on why they need to adopt the proposed changes.

BT has competent, experienced, and dedicated staff who can sustain and will continue to innovate strategies depending on the needs of future projects. The successful implementation of this project has further boosted BT's reputation as evidenced by its increasing number of partnerships with other international agencies/organizations to continue its work on ASGM.

Overall, the said factors all point to BT's readiness to take on the challenge of transforming other ASGM communities. Despite the constraints and challenges, BT's project sites serve as good models on how to reduce and to eventually eliminate Mercury use in various ASGM communities in the country.

ANNEXES

Annex 1 TERMS OF REFERENCE

FOR

END OF PROJECT EVALUATION
OF

“Mercury-free mining in the Philippines 2014-17”

Background and introduction

BAN Toxics! has implemented a mercury-free mining project in mining communities in Kalinga and Camarines Norte since 2011, and in South Cotabato since 2014. Since the beginning, the Danish government has financed the project through a grant from CISU, and the project is implemented in close collaboration with the Danish NGO Diálogos, the latter being directly responsible towards CISU regarding funds and project implementation.

The project has run in two phases. The current (second) phase was initiated in July 2014 and end of June 2017. It has a total budget of DKK 3,499,132 (app. PHP 25,200,000).

The project's main aim is to stop mercury pollution from small-scale gold mining by technical training of miners, strengthening of the civil society, and awareness raising about health effects and environmental impact.

The **specific objectives** are that:

1. Miners in the project areas, both men and women, get to know about the dangers of mercury to health, and convert to mercury-free gold extraction methods.
2. Civil society stakeholders, particularly healthcare workers, women, children, youths, and politicians learn about the dangers of mercury to health and environment, and they get empowered to support the miners in their transition to mercury-free mining techniques.
3. Strategies for a mercury-free municipality are prepared and rooted locally. The experience from these processes is documented for use in future project areas. Strategies for scaling-up and snowballing effects to neighbour mining communities is developed and documented. BAN Toxics! is capacitated to sustain the growth of the program.

Objectives of the end of project evaluation

The objective of the end of project evaluation is to assess to which extent the project has:

- reached the project objectives stipulated in the project log frame and the project document,
- produced any results - positive or negative - not foreseen in the project log frame and the project document.

Furthermore, the end of project evaluation shall assess

- BAN Toxics! potential as an NGO and its potential as a project partner in future projects / interventions in the Philippines,
- and, if relevant, give recommendations for future interventions in the area.

Outputs of the end of project evaluation

- Presentation and discussion of evaluation results with BAN Toxics! staff and board members.

- An evaluation report. The report must be written in English and must include an executive summary with an overview of most important findings and conclusions. The report should be maximum 40 pages and executive summary maximum 4 pages.

Scope of work and methodology

The evaluator shall familiarize himself/herself with **relevant documentation** from the project before visiting the project area:

- Baseline studies and follow-up studies
- Evaluation of phase 1
- Project application/project document from phase 2
- Quarterly and annual reports from BAN Toxics! to Diálogos (including status on objectives and indicators) and field visit reports from Diálogos.

To assess the project, a **field visit** will be undertaken in the project areas. The evaluator is free to choose fieldwork methodology but is expected to include visits to relevant stakeholders and collaborating partners in all three areas like e.g. LGUs, regional authorities, environment and health authorities, health facilities, landowners and miner organisations. Furthermore, it is strongly recommended that the external evaluator participate in a demonstration of the mercury-free method at the training facility in T'boli in the beginning of the field visits before going to Jose Panganiban and Gaang. He/she must present BAN Toxics! and Diálogos with a tentative workplan including field work methodology (inception report) before the evaluation takes place. BAN Toxics! will assist in making the practical arrangements during the field visit.

Furthermore, **skype interviews** should be carried out with members of Diálogos' project group.

Finally, **interviews/meetings with relevant stakeholders outside the project area** are supposed to take place. This might include the Department of Health and Department of Environment and Natural Resources in Manila and respective provincial/regional offices in South Cotabato and the Davao region. The evaluation is estimated to cover 30 working days. This includes preparatory desk study, fieldwork in the project areas, meetings, and report compilation. A separate contract specifying working conditions including salary will accompany these terms of reference.

Approach

The task of the evaluation must include but not necessarily be limited to an analysis of the following:

Achievement of objectives

- Assess to what extent the project has contributed to achievement of the overall objective
- Assess to what extent the project has achieved its 3 immediate objectives
- Assess the relevance of the activities in relation to achieving project objectives
- Assess the relevance of the target groups in relation to achieving project objectives
- Assess whether the project has given rise to positive or negative results not foreseen in the project document
- Assess the extent to which achievements of the project objectives can be expected to be sustainable

Project implementation and performance in the three project areas taking into account the different points of departure and contexts of the three areas as well as the different challenges met

- Assess whether the project has been implemented in accordance with what was stipulated in the project document
- Assess whether constraints or risks in project implementation have been analyzed sufficiently during the project and whether mitigating actions have been put in place when needed

- Assess to which extent the project partners have been able to draw benefit from new opportunities arising during project implementation

Project management

- Assess the project structure, management and administration on the project.
- Assess to which extent the project has been able to coordinate its activities with other actors including the official health service and other NGOs
- Assess the project's monitoring and evaluation system
- Assess to which extent the project has been managed in a cost-efficient manner

Future

- Based on the findings, give recommendations regarding potential future project activities in the area
- Based on the findings, give recommendations that may help BAN Toxics! to strengthen its position as an NGO in the area further, even in the potential absence of funds from Denmark

The evaluator

The evaluator shall have a proven track record of assessing and evaluating development projects in a civil society context and preferably within the health, environment and natural resource management. He/she must be familiar with (or familiarize him-/herself) with relevant Philippine policies relating to these areas, and with the Basic Principles and the Guidelines for the Civil Society Fund (donor principles and guidelines). It is preferable that the evaluator is able and willing to visit all project areas – including Gaang, Kalinga.

The evaluator acts independently of Diálogos and BAN Toxics! when drafting recommendations and conclusions.

Timing

The project evaluation should be concluded and the final report handed over to Diálogos no later than July 30st, 2017.

Deliverables

- Workshop with presentation of results for BAN Toxics! staff and board
- A draft version of the evaluation report shall be presented to Diálogos and BAN Toxics! before final delivery to allow for correction of any errors and misunderstandings. Deadline for the draft report is no later than 2 weeks after the field work has been finalized
- The final version of the evaluation report shall be sent to Diálogos and BAN Toxics! no later than 5 weeks after the field work has been finalized

INCEPTION REPORT:

Mercury-Free Mining in the Philippines 2014-17

Allan V. Villanueva
Lead Project Evaluator

Mary Ann V. Fuertes
Raymundo R. Pavo
Co-Evaluators

26 June 2017

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I. List of Acronyms and Abbreviations

ASGM	Artisanal and Small-Scale Gold Mining
BT	Ban Toxics
CSO	Civil society organization
DENR	Department of Environment and Natural Resources
DOH	Department of Health
FGD	Focus group discussion
GAD	Gender and development
KII	Key informant interview
LGU	Local government unit
M&E	Monitoring and evaluation
NGO	Non-government organization
SSM	Small-scale mining
TWG	Technical Working Group
TOR	Terms of Reference
UNEP	United Nations Environment Programme

II. Introduction

In 2011, the Philippine government finalized the 10-year National Strategic Plan on eliminating Mercury use in Artisanal and Small-Scale Gold Mining (ASGM) areas. Ban Toxics (BT) was actively involved in the formulation of such Plan and has endeavored to contribute more in achieving some of its vital targets. Hence, BT along with Dialogos (a Danish NGO), International Committee of Environmental, Occupational and Public Health, the Geological Survey of Denmark and Greenland, and the University of Copenhagen, initiated a 3-year project entitled: Reducing Mercury Use in Artisanal and Small-Scale Gold Mining in the Philippines (2011-2014). One notable accomplishment of the project is the 95% conversion rate of the 1,700 small-scale mining (SSM), Mercury-dependent gold miners in Gaang, Kalinga into Mercury-free methods.

After the successful implementation of the Phase 1 in 2014, a second Phase followed with an expansion in area coverage and taking into consideration the recommendations from the Phase 1. Below is the summary of the recommendations and the proposed actions identified in the project proposal.

Table 1. Recommendations of Project Evaluation (Phase 1) and Proposed Actions Identified in the Project Proposal⁵

Recommendations	Proposed Actions
The project should consider enhancing capacity of project staff in policy advocacy, effective community facilitation, mediation techniques, problem analysis and strategy building, as well as lobbying and networking.	The proposed project includes capacity building of BT staff.
Mainstream and integrate the project with programs of the government line agencies and Regional Development Council.	The proposed project clearly intends to supplement and support the implementation of the Philippine National Strategic Plan, and through BT's existing good collaboration with national authorities, the project will formally be brought to the Technical Working Group and National Steering Committee meetings of the Philippine Department of Environment and Natural Resources (DENR).
An effective strategy that will draw the active participation of the Mining Committee as well as continuous mentoring support and capacity building in Kalinga, Camarines Norte, and new areas.	Continuous support will be given to old project areas in Kalinga and Camarines Norte, and emphasis will be put on maintaining the changes through capacity building and support to the Mercury Committees or equivalent entities in their elaboration of Mercury-free action plans. Achievements will be cascaded from one project site to another through exchange visits, ASGM summits, etc.
Social preparation of target groups, ensuring in-depth understanding of community groups on the issue as well as their readiness and commitment to change.	Key effort will be placed in organizing key stakeholders in the proposed project in addition to establishing local and national government support.

Considering the foregoing, this project evaluation will assess whether the project management has carried out the aforesaid recommendations and proposed actions.

For the Phase 2 of the project, which also had a three-year timeframe, it ended in June 2017.

To assess how far the Phase 2 has achieved the desired objectives or outcomes of the project, this *End-of-Project Evaluation* was sought for with the following specific Terms of Reference (TOR):

⁵ Project proposal: "Mercury-Free Gold Mining" by Dialogos, under The Civil Society Fund Major Development Project, 01 April 2014 to 31 March 2017.

- **Determine the extent of accomplishment vis-a-vis project logframe aimed at three (3) main sectors/areas:**
 - the miners
 - other stakeholders (politicians, health workers, CSOs—youth, children, women, among others)
 - Sustainability of the initiatives to end Mercury use among miners
- **Identify any results—positive or negative—not foreseen in the project logframe and the project document**

This project evaluation will likewise assess the following:

- **BT's potential as an NGO and its potential as a project partner in future projects / interventions in the Philippines** with regard to eliminating Mercury use/pollution
- **Give recommendations for future interventions in the area** (if relevant)
 - Potential future project activities in the area
 - That can help BT to strengthen its position as an NGO in the area further, even in the potential absence of funds from Denmark

III. Project Description

A. Overall Objective

The project's main aim is to stop Mercury pollution from small-scale gold mining by: (a) technical training of miners; (b) strengthening of the civil society; and, (c) awareness-raising about health effects and environmental impact.

B. Specific Objectives

The following are the project's specific objectives for evaluation:

1. Miners in the project areas, both men and women, get to know about the dangers of Mercury to health, and convert into Mercury-free gold extraction methods.
2. Civil society stakeholders, particularly healthcare workers, women, children, youths, and politicians learn about the dangers of Mercury to health and environment, and they get empowered to support the miners in their transition to Mercury-free mining techniques.
3. Strategies for a Mercury-free municipality are prepared and rooted locally. The experience from these processes is documented for use in future project areas. Strategies for scaling-up and snowballing effects in neighbor mining communities is developed and documented. BT is capacitated to sustain the growth of the program.

C. Project Logical Framework

The project logical framework culled from the project document is reproduced in Table 2 below. The last column lists down the comments/questions of the project evaluation team.

Table 2. Project Logframe

Indicators	Means of Verification	Comments/Questions of Evaluation Team
<p>Objective 1 (Miners)</p> <ul style="list-style-type: none"> • 75% of the miners have increased their knowledge on Mercury toxicity • 10% miners are trained in the Mercury-free method • 75% of women miners are trained in the Mercury-free method • 50% ASGM have converted to Mercury-free gold extraction methods • 50% of milling facilities are Mercury free 	<p>Objective 1</p> <ul style="list-style-type: none"> • Direct observation • Interviews with ASGM and stakeholders • Baseline and follow-up questionnaire survey 	<ul style="list-style-type: none"> • Do we have a progress report comparing baseline with mid-line, and endline data? • What are the major gaps in achieving these targets? What were the solutions implemented? • Were there deviations/adjustments in the targets? • The evaluation team will request BT/Dialogos to fill out a matrix on actual accomplishments to improve efficiency of data processing and analysis.
<p>Objective 2 (Stakeholder Empowerment)</p> <ul style="list-style-type: none"> • 90% of the health care workers have increased knowledge about Mercury toxicity. • 1 women-miners-organization is formed in each project area, or if there is an existing organization, this will be capacitated on Mercury use in ASGM issue. • 75% of school children, youths, and women have increased their knowledge about Mercury toxicity. • 1 youth organization is formed in each project area, or if there is an existing organization, this will be capacitated on Mercury use in ASGM issue. • 50% of youths are organized or belong to an organization representing their interests. • 75% of out-of-school youths and Youth Council members have increased knowledge about Mercury toxicity. • 25% of out-of-school youths and Youth Council are members of BT's Bantay Toxics initiative. • 1 well-functioning Mercury Committee is present in each project area. 	<p>Objective 2</p> <ul style="list-style-type: none"> • Direct observation • Interviews with healthcare workers, women, children, youths, landowners, and politicians • Baseline and follow-up questionnaire survey • Interviews with members of Mercury Committees • Inspection of minutes of meetings of the Mercury Committees • Inspection of registries in the health facilities • Youth Council resolutions or projects related to Mercury or to the project 	<ul style="list-style-type: none"> • What was the reason for the cancellation of the project in Kalinga? • What lessons can be learned from Kalinga in terms of stakeholder engagement? • Does BT have community organizers? How many for the 3 sites? • What is the level of participation/role of formed associations/ organizations in the project planning, implementation, and assessment? What is the plan for them after the project? • How have LGUs and government agencies been involved in this project?
<p>Objective 3 (Sustainability)</p> <ul style="list-style-type: none"> • Each project area has developed and adopted a local sustainability plan. • The project has developed a concept and manual for sustaining positive changes in the project areas. • The project has developed a strategy and a manual for scaling up the program to other areas in the Philippines and for other countries as well. • Participation at the Technical Working Group (TWG) of the Philippines on ASGM and National Steering Committee • Participation at the UNEP ASGM Partnership 	<p>Objective 3</p> <ul style="list-style-type: none"> • Review of manuals and reports • Number of networks established in the areas or for which BT becomes part of • Inspection of materials • Interviews with stakeholders 	<ul style="list-style-type: none"> • Is the sustainability plan already being operationalized? Has it been implemented and institutionalized? • How can the project ensure that the sustainability plan will be implemented/followed after the end of the project? What mechanisms have been put in place?

IV. Assessment of Evaluation Issues and Questions

After reviewing the project documents and the TOR, the project evaluation team has identified the following evaluation criteria:

Table 3. Evaluation Criteria

Evaluation Criteria	
(1) EFFECTIVENESS	<p>Determines the extent of project accomplishments vis-à-vis project objectives.</p> <ul style="list-style-type: none"> a. <i>To what extent have the expected outputs, outcomes, and long-term objectives been achieved or are likely to be achieved?</i> b. <i>Has the project generated any results that could lead to changes of the assisted institutions? Have there been any unplanned effects?</i> c. <i>Are the project outcomes commensurate with the original or modified project objectives?</i> d. <i>How do the stakeholders perceive the quality of outputs?</i> e. <i>Were the targeted beneficiary groups actually reached?</i> f. <i>What outputs and outcomes has the project achieved so far (both qualitative and quantitative results)?</i> g. <i>What catalytic or replication actions has the project carried out?</i> h. <i>To which extent has the project partners been able to draw benefits from new opportunities arising during project implementation?</i>
(2) EFFICIENCY	<p>Measures how efficiently the various project inputs are converted into outputs in the implementation process (i.e., productivity of implementation process). This criterion will likewise assess the appropriateness of inputs, the schedule, and mechanisms of project implementation.</p> <ul style="list-style-type: none"> a. <i>Was the project cost-efficient and cost-effective?</i> b. <i>Has the project produced results (outputs and outcomes) within the expected time frame?</i> c. <i>Was project implementation delayed, and, if it was, did that affect cost-effectiveness or results?</i>
(3) RELEVANCE	<p>Examines whether project objectives and goals, and project scope were/are in line with the priority needs and concerns of the project areas at the time of the project appraisal and evaluation. It will delve into the relevance of the project's objectives, outputs, and outcomes to the different target groups of the interventions.</p> <ul style="list-style-type: none"> a. <i>What is the relevance of the project's objectives, outputs, and outcomes to the different target groups of the interventions? Also, what is the relevance of the target groups in relation to achieving project objectives?</i> b. <i>What is the relevance of the project in strengthening the policy advocacy for ASGM in the country?</i> c. <i>What is the relevance of the project to the country's goal of eliminating Mercury use?</i>
(4) IMPACT	<p>Identifies to what extent the overall goal of the project has been achieved, and verify intended and unintended, direct and indirect, positive and negative changes in the course of project implementation. (The focus here is on the changes that were caused by the project—change in attitude, practices, living condition of the beneficiaries and other stakeholders, as well as change in the environment.)</p> <ul style="list-style-type: none"> a. <i>What are the project outcomes in terms of learnings of project beneficiaries (short-term), actions (medium-term), and conditions (long-term)?</i> b. <i>Has the project generated any results that could lead to changes of the assisted institutions?</i> c. <i>What are potential longer-term impacts of the project?</i> d. <i>Have the intended impacts been achieved?</i> e. <i>What are the unintended impacts of the project?</i>

Evaluation Criteria	
	<p>f. <i>What are the direct and indirect impacts of the project?</i></p> <p>g. <i>What are the positive and negative impacts of the project?</i></p>
(5) SUSTAINABILITY	<p>Examines whether the project can be sustained after its completion. This criterion will include a study of technical, organizational, financial, maintenance aspects, and ownership of project beneficiaries. It will also include an analysis of issues and constraints that may impede the sustainability of the project after its completion.</p> <p>a. <i>Were constraints/risks in project implementation sufficiently analyzed during the project? What mitigating actions have been put in place when needed?</i></p> <p>b. <i>How can the project be sustained in terms of technical, organizational, financial, maintenance aspects, as well as ownership of project beneficiaries?</i></p> <p>c. <i>What issues and constraints can impede the sustainability of the project after its completion?</i></p> <p>e. <i>What are the possible risks to project outcomes that will affect continuation of benefits after the project ends? Are there any plans or strategies identified to minimize these risks?</i></p>

Aside from the aforesaid evaluation criteria, the project evaluation team will also assess the following project management components:

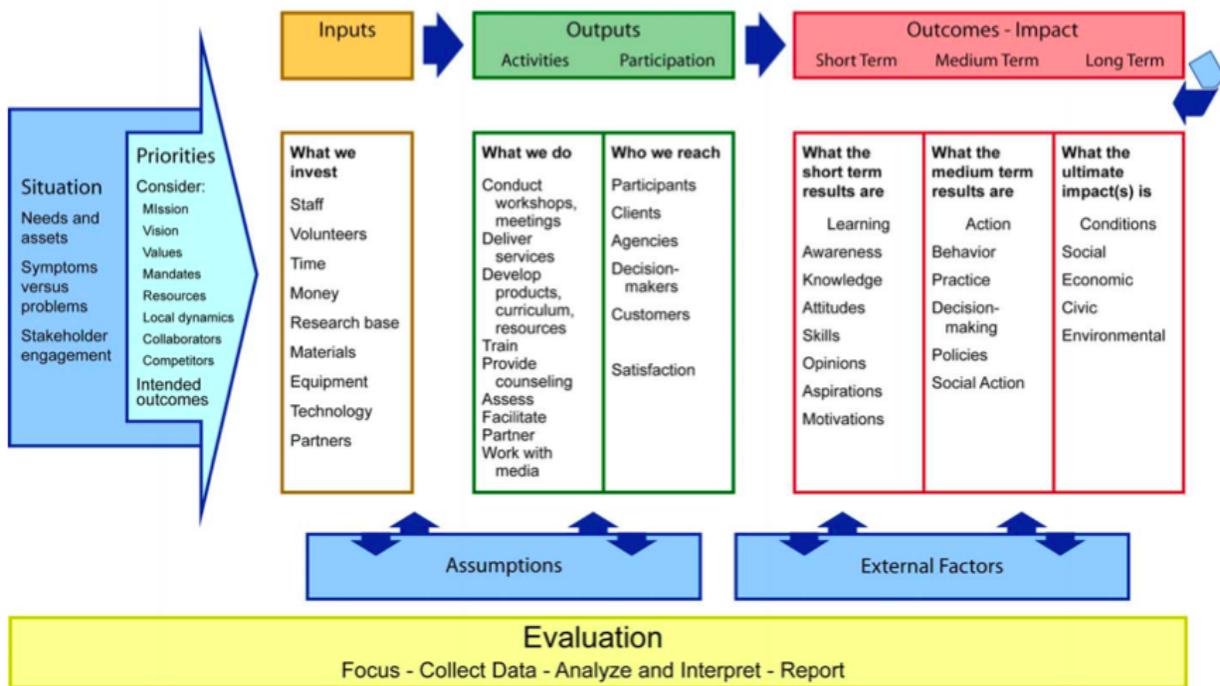
- *Project structure, management, and administration of the project*
- *Extent the project has been able to coordinate its activities with other actors including the official health service and other NGOs*
- *Project's monitoring and evaluation (M&E) system*

Overall, the evaluation will examine the attainment of objectives and planned results (including relevance, effectiveness, and efficiency), project impacts and sustainability, and catalytic role. It will look at processes affecting attainment of results as a basis for lessons and recommendations.

V. Evaluation Methodology

The following logic model will be used in evaluating the project. Aside from evaluating project outputs/deliverables, outcomes will be assessed in terms of learnings (short-term), actions (medium-term), and conditions (long-term). The focus of the evaluation will be on the outcomes or changes brought about by the project and not on the activities implemented.

Figure 1. Logic Model



A combination of project evaluation methods (triangulation) shall be used by the evaluators:

1. A **desk review** of all project documents including, but not limited to:
 - Baseline studies and follow-up studies
 - Evaluation of phase 1
 - Project application/project document from phase 2
 - Quarterly and annual reports from BT to Diálogos (including status on objectives and indicators) and field visit reports from Diálogos
2. **Key informant interviews** (KIIs)⁶ and/or **focus group discussions** (FGDs) with project stakeholders:
 - Local government units (LGUs)
 - Regional/provincial environment and health authorities (Davao region and South Cotabato)
 - Environment and health authorities (DENR and DOH central offices in Manila)
 - Health facilities and healthcare workers
 - Landowners
 - Miner organizations
 - Women, children, and youth
 - Diálogos' project group
3. **Transect walk method** and **direct observation** at project sites (e.g., mining sites) – The FGD participants and/or key informants will bring/lead the evaluators to the actual site/s of Mercury-free operations (except for Kalinga due to security issue in the area).
4. **Documentation of narratives** – Local ASGM narratives will be documented to capture concrete local stories and to put a “human face” to the project evaluation report.

⁶ Face-to-face or through any other appropriate means of communication

- Sharing of narratives on before and after the Mercury-free interventions, values learned, views on the environment and role of human agency, and community life
- To be validated by sharing on issues and proposed solutions to check if issues have been addressed, and estimate the community's decision-making potential

5. Incorporation of gender and development (GAD) perspective

- Participants: Should be at least 50% women
- Through gender issues/concerns: Sharing on the roles of men and women in the implementation of intervention process to see if women are given decision-making opportunities

6. The project evaluation will highlight **lessons learned** in project implementation as well as **best practices** in the project sites.

The following will be the sources of data/information:

Table 4. Data Sources for the Evaluation Criteria

Criteria	Sources of Information / Data
Effectiveness (<i>Outputs</i>)	<ul style="list-style-type: none"> ● Project reports ● KIIs and FGDs with project stakeholders ● Observations at project sites ● Documentation of narratives
Efficiency	<ul style="list-style-type: none"> ● Project reports, including technical, monitoring, progress, final, financial, and end-of-contract reports ● Activity reports ● Interviews with project stakeholders, including financial officers ● Observations at project sites
Relevance	<ul style="list-style-type: none"> ● Project documents ● Documentation of narratives ● National policies re use of Mercury; treaties
Impacts (<i>Outcomes</i>)	<ul style="list-style-type: none"> ● Project reports ● KIIs and FGDs with project stakeholders ● Documentation of narratives ● Observation at project site (physical environment)
Sustainability	<ul style="list-style-type: none"> ● Project reports ● KIIs and FGDs with project stakeholders
Project management	<ul style="list-style-type: none"> ● Project reports ● KIIs and FGDs with project stakeholders ● Observations at project sites

VI. Work Plan

The evaluation is scheduled to take place from June 22 to July 30, 2017. The table below provides the timeline for key evaluation milestones.

Table 5. Timelines and Key Milestones

Activities	Dates
Start of project contract	June 22, 2017
Preparatory meetings, review of secondary materials, project-related documents	June 22-26, 2017
Inception Report	June 26, 2017 (Mon)
Coordination work; conduct of site visits, KIIs, and FGDs with various project stakeholders	June 22 to July 12, 2017
Consolidation of data, processing, analysis, and report writing	July 1 to July 22, 2017
Submission of first draft	July 22, 2017 (Saturday)
Presentation of results/findings	July 25, 2017 (Tuesday)
Comments and revisions (by Dialogos / BT)	July 22-27, 2017
Finalization of report	July 27-29, 2017
Submission of final report	July 30, 2017 (Sunday)
End of contract	July 30, 2017

Annex 3 – List of documents reviewed

- Ban Toxics (2015). Media Log Request ASGM, July 2015. Unpublished report.
- Ban Toxics (2015). Camarines Norte Report, July to September 2015. Unpublished report.
- Ban Toxics (2016). July-September 2016 Quarterly Report, Partnership Activities, Small-Scale Development Projects, and Large-Scale Development Projects. Unpublished report.
- Ban Toxics (2017). October 2016-March 2017 Quarterly Report, Status Report. Unpublished report.
- Ban Toxics (n.d.). Socio-Economic aspects of ASGM operations: The T'boli experience. Unpublished report.
- Ban Toxics (2014). Mercury-free method for recovering gold: Trainer's manual. Unpublished report.
- Ban Toxics (n.d.). ASGM Briefer. Eliminating Mercury use in artisanal and small-scale gold mining. Unpublished report.
- Ban Toxics (n.d.). Stakeholders strategic plan for the Mercury free artisanal small scale gold mining province of South Cotabato. Unpublished report.
- Ban Toxics! (2010). The price of gold: Mercury use and current issues surrounding artisanal and small-scale gold mining in the Philippines.
- Ban Toxics (2016). Filipino women in artisanal and small-scale gold mining: Case studies on women's perspectives, situations and roles in Camarines Norte and Kalinga provinces.
- Ban Toxics (2017). Mercury trade in Asia.
- Cordy, Paul (n.d.). Philippine Mercury inventory training report. Unpublished report.
- Diálogos (2014). Mercury-free small scale gold mining report from project visit in the Philippines September 2014. Unpublished report.
- Diálogos (2015). Status Report: April to June 2015. Unpublished report.
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- Diálogos (2016). Status Report: January to March 2016. Unpublished report.
- Diálogos Project. (n.d.). Powerpoint Presentation.
- Diálogos (2016). Status Report: April to June 2016. Unpublished report.
- Diálogos (2016). Status Report: July to September 2016. Unpublished report.
- Diálogos (2017). Project proposal: "Mercury-Free Gold Mining" under The Civil Society Fund Major Development Project, 01 April 2014 to 31 March 2017. Unpublished report.
- Diálogos (2017). Mercury-free Small-Scale Gold Mining Report from project monitoring visit in the Philippines 2017. Unpublished report.

Annex 4 – List of key informants interviewed

I. Focus Group Discussion (FGD) and Key Informant Interview (KII) in T'boli, South Cotabato

A. FGD with Women's Sector, Barangay Kematu, T'boli

July 1, 2017, 1:30PM-4:00PM

Barangay Hall, Barangay Kematu

No. of Participants: 13

NAME	ORGANIZATION/FUNCTION	ADDRESS	CONTACT
Cheryl Sawan	Barangay Health Worker (BHW)	Barangay Desawo	09108151822
Helen B. De la Pena	President, Women's Federation in Barangay Kematu	Barangay Kematu	09105462610
Olympia T. Piang	Barangay Health Worker (BHW), Women Officer	Barangay Kematu	09358700346
Gemma K. Legal	Women Organization Member	Sitio Butlehek	-
Norma N. Sudaog	Barangay Health Worker (BHW)	Sitio Kandog	-
Maimai L. Undan	Women Organization Member	Sitio Butlehek	-
Mylene Tali	Women Organization Member	Sitio Kandog	-
Lorena Lugan	Women Organization Member	Sitio Kandog	-
Maaritis Tanoh	Women Organization Member	Sitio Safan	-
Nita Kato Domek	DCC Officer	Barangay Kematu	-
Pacita G. Tomcod	Barangay Health Worker (BHW), Women Member	Barangay Kematu	09755475711
Marites M. Juanico	Barangay Health Worker (BHW)	Barangay Kematu	
Cris O. Yara	Women Organization Member	Barangay Kematu	09756773004

B. Demonstration of Artisanal Mercury Free Gold Processing Method and Discussion with Male Miners

July 2, 2017, 8:30AM to 12:00NN

Ball Mill Facility of Rizalde Perez, Purok Poblacion

No. of Participants: 6

NAME	FUNCTION	ADDRESS	CONTACT
Rizalde Perez	BT Technical Miner	Purok Lugan 3, Kematu	09359852406
Jerry S. Pacardo	Miner, Trainee	Barangay Desawo	09076331646
Joemarie P. Sawan	Miner, Trainee	Barangay Desawo	09485773096
Vicente B. Valmoria	Miner, Tunnel Inspector	Purok Pag-asa	
Darryle Perez		Purok Lugan 3, Kematu	09755476177

C. Key Informant Interviews

July 1-3, 2017

No. of Persons Interviewed: 13

NAME	ORGANIZATION/FUNCTION	ADDRESS	CONTACT
Cheryl G. Sawan	Barangay Health Worker (BHW), Woman Miner	Desawo, Barangay Kematu	09108151822
Vicente B. Valmoria	Ball Mill Processor Owner	Purok Pag-asa, Poblacion	-
Teofista Valmoria	Ball Mill Processor Owner	Purok Pag-asa, Poblacion	-
Rizalde Perez	Mercury- Free Ball Mill Processing Owner	Lugan 3, Barangay Kematu	09359852406
Josephine Balonga	Ball Mill Processor Owner, PRMB Mining Representative	Poblacion, Barangay Kematu	09265030320

Siegfred M. Flaviano	Head, Provincial Environment and Mining Office (PEMO)	Marbel, South Cotabato	09985740705
Dolores Gonzales	Barangay Nutrition Scholar (BNS)	Poblacion, Barangay Kematu	09058928368
Ricky D. Bunda	Municipal Mining Safety Inspector	T'boli Municipality	09174571999
Jose Joreto Balonga	Financier, Ball Mill Processor Owner, Tunnel Owner	Barangay Kematu	-
Mansueto de la Pena	Barangay Captain	Barangay Kematu	-
Julian Asion	MENRO	T'boli, South Cotabato	09107821806
Hayde N. Golingay	MHO	T'boli, South Cotabato	
Engr. Constancio Paye	Director, MGB Region 12	Marbel, South Cotabato	09204201155

D. FGD with Youth Sector, Barangay Kematu

July 2, 2017, 1:30-4:00PM

T'boli National High School, Purok Poblacion

No. of Participants: 8

NAME	FUNCTION	ADDRESS	CONTACT
Louie Jay Toledo	ESO Grade 10 Chairman	Purok Lugan 3	09955802841
Anna Maries S. Orella	ESO Grade 11 Chairman	Purok Afus	09555369443
Lorence F. Latoraza	ESO Grade 10 Chairman on Enforcement	Barangay Kematu	09055908197
Ismael Y. Mandeoya	Grade 10 ESO Vice-President	Purok Blanca	09756270989
Cyber John S. Isaul	ESO President	Poblacion, T'boli	09154218565
Kaye F. Balbarino	ESO Treasurer	Poblacion, T'boli	-
Karl Stephen O. Siolao	ESO Representative	Edward, T'boli	-
Tesiree Mae M. Quia	ESO Grade 11 Chairman	Purok Saging, Poblacion	09051858805

II. Focus Group Discussion (FGD) and Key Informant Interview (KII), Kalinga

A. Key Informant Interviews

July 7-9, 2017

Tabuk City, Golden Gate Station, Sesec-an and Balbalasang, Kalinga

No. of Persons Interviewed: 7

NAME	POSITION/FUNCTION	ADDRESS	CONTACT NO.
Engr. Dominic Jude B. Sugguiyao	Environment and Natural Resources Office (ENRO) – OIC Department Head	Provincial Capitol, Bulanao, Tabuk City	-
Cerilo B. Tega, Jr.	Municipal Administrator	Balbalan Municipality	-
Ester Roselle D. Calma	Municipal Health Officer	Balbalan Municipality	-
Valentin B. Atolba, PhD	Executive Director, Saint Paul's Memorial School of Kalinga, Inc.	Balbalasang, Balbalan	09187685522
Rachel A. Panod, PhD	Principal, Saint Paul's Memorial School of Kalinga, Inc.	Balbalasang, Balbalan	-
Royce Lingbawan	Former BBA-BOT, Currently Project Manager of Foundation for the Philippine Environment (FPE)	Balbalasang, Balbalan	-
Zenaida Magbayac	Women Miner Trainer	Bulanao, Tabuk City	09275013324

B. FGD with BBTA Members and BOT and Gaang Miners

July 8, 2017, 9 to 1PM

Golden Gate Station, Gaang Mines

No. of Participants: 19

NAME	ORGANIZATION/FUNCTION	SEX
Patrocinia Mayongdad	Banao Bodong Tribe Association (BBTA) -	F
Merriam Balderas	Barangay Kagawad	F
Rosito A. Borreto	Barangay Captain	M
Solomon Macaggay	BBTA Member, Ban Toxics Trainer-Miner	M
Edwin Paganao	BBTA Board of Trustees (BOT)	M
Isagani Allain	BBTA Board of Trustees	M
Zenaida Magbayac	Women Miner	F
Gilbert Gooban	BBTA BOT	M
Juliet S. Guiaoan	Kalipi Federation Secretary	F
Anthony Alanguinan	BBTA BOT	M
Wayne G. Duguiawe	BBTA BOT	M
Shelwayne D. Gumabat	BBTA Treasurer	M
Ricky B. Gooban	BBTA Chief Marshall	M
Lino C. Daogas	Marshall Gaang Mines	M
Pablo C. Tacusin	Marshall Gaang Mines	M
Maricel Rivera	Collector 1, Gaang Mines	F
Philline Gannaban	Bookkeeper	F
Benedict Kibayan	Barangay Captain	M
John Smith Gullayan	BBTA BOT	M

C. FGD with Informants in Balbalasang, Balbalan

July 8, 2017, 6 to 9PM

Balbalasang, Balbalan

No. of Participants: 4

NAME	ORGANIZATION/FUNCTION	CONTACT	SEX
Hermia Dao Coan	Barangay Kagawad	09059361198	F
Greg Malaggay	Barangay Kagawad	09059282151	M
Solomon Malaggay	BBTA Member	09368070315	M
Joena Lynn Bittanga	Barangay Health Midwife (BHM)	0926200481	F

III. Focus Group Discussion and Key Informant Interviews in Camarines Norte**A. FGD with Women Miners, Luklukan Sur, Jose Panganiban, Camarines Norte**

July 9, 2017

Purok 7-Pinuhan

No. of Participants: 10

NAME	ORGANIZATION	DESIGNATION	CONTACT
Charito E. Elcano	Pinuhan Small Scale	President	09073099180
Rosalina Estimo	PSSMA	Member	-
Mona R. Diaz	PSSMA	Member	-
Emelissa Estimo	PSSMA	Member	-
Clarita A. De Leon	PSSMA	Member	-
Maria S. Marquez	PSSMA	Member	-
Eva Palmera	PSSMA	Member	-
Noenue Plancalba	PSSMA	Member	-
Ailene Rivera	PSSMA	Member	-
Gina R. Bigago	PSSMA	Member	-

B. FGD with Local Residents, Luklukan Sur, Jose Panganiban, Camarines Norte

July 9, 2017

Barangay Hall

No. of Participants: 6

NAME	ORGANIZATION	DESIGNATION	CONTACT
Filip Cindoy	PIO	-	-
Andy	-	-	-
Heriek	-	-	09127416361
Manuel Soriano Sr.	-	-	-
Sandy R. Lazarate	Barangay Kagawad	-	-
Teodymer Bachan	Barangay Police	-	-

C. FGD with Informants, Sta. Rosa Sur, Jose Panganiban, Camarines Norte

July 9, 2017

Barangay Hall

No. of Participants: 9

NAME	DESIGNATION	ADDRESS	CONTACT
Cheryl S. Quintao	Barangay Kagawad	Purok 3	09996628399
Aileen Nazarita	Barangay Health Worker	Purok 3	09508670625
Melinda Mabelin	BHW	Purok 1	09100264073
Nely A. Verzo	BHW	Purok 4	09207854137
Neriza Bombita	BHW	Purok 5	09309066087
Janice E. Banal	BHW	Purok 2	09077436577
Roel Arena	Barangay Kagawad	Purok 1	09999273075
Francis Mabelin	Batang Bantay Toxics (BBT)	Purok 1	09101018540

D. FGD with Informants, Sta. Elena, Jose Panganiban, Camarines Norte

July 10, 2017

Barangay Hall

No. of Participants: 7

NAME	ORGANIZATION	DESIGNATION	CONTACT
Esperedion Canta	-	-	-
Welmar B. Mura	-	-	-
Henry M. Matial	-	-	-
Teresita Bongat	Barangay Office	Barangay Kagawad	-
Richard Mamasos	-	-	-
Romeo S. Lopez	Barangay Office	Barangay Kagawad	-
Noriman Garais	Barangay Office	Barangay Kagawad	-

E. Key Informant Interviews

July 8-12, 2017

No. of Persons Interviewed: 3

NAME	ORGANIZATION/FUNCTION	ADDRESS	CONTACT
Sarah P. Aviado	MENRO	Jose Panganiban	-
Mary Jane Rolda	DOLE provincial head	Jose Panganiban	-
Atty. Emilio V. Zantua, Jr.	Secretary, Sangguniang Panlalawigan	Camarines Norte	-
Dr. Antonio Fulong	Municipal Health Officer	Jose Panganiban	

Annex 5

Status of Accomplishments vis-a-vis Logframe⁷

OBJECTIVES (Indicators)	BASELINE and TARGETS	STATUS OF ACCOMPLISHMENT As of June 2017	REMARKS
Objective 1 (Miners)			
<p>75% of the miners have increased their knowledge on mercury toxicity</p> <ul style="list-style-type: none"> Improved teaching materials 	<p>South Cotabato: Baseline- 5,000 Target: 3,000</p> <p>Jose Panganiban: Baseline -3,000 Target- 1,500</p> <p>Kalinga: Target 2,500-5,000</p>	<p>Total for the two (2) project sites = 3,991</p> <p>T'boli: 3,290 (110%) of the target miners trained</p> <p>Camarines Norte: 701 (47%) of the target miners trained</p> <p>Kalinga : total reached 51</p> <ul style="list-style-type: none"> 15 participants (12M; 3F) from Gaang Mines participated in the Peer Education and Mercury Health Education workshop 	<ul style="list-style-type: none"> Some miners during FGD were able to explain the environmental fate of mercury when released to the environment, why it can persist and why it is dangerous while narrating its health effects Two videos demonstrating the mercury-free method were produced Suggestion for the indicator: to add number of miners who become resource persons on the topic
<p>10% miners are trained in mercury free method</p> <p>Improved trainers' handbooks and improved skills among trainers</p>	<p>South Cotabato: Baseline- 5,000 Target: 1,000</p> <p>Jose Panganiban: Baseline -3,000 Target- 1,500</p>	<p>T'boli: 1,184 miners (118.4%) out of the 1000 target miners trained on GCM (Gravity Concentration Method)</p> <p>Jose Panganiban: 789 miners (52.6%) of the target trained</p> <ul style="list-style-type: none"> 12 formal miner to miner trainings and 32 coaching or one-on-one sessions conducted one (1) Training Manual on GCM produced which was already used by trained local miner trainer, Nono Perez and BT when they gave training in Uganda 	<p>Kalinga: Two of the recruited trainers from Gaang are now resource persons in the MTM Training in South Cotabato (Solomon and Zen)</p> <p>T'boli: Presence of local miner expert in the person of Nono Perez and 2 more second liners. It is worth noting that Nono has become an international trainer having shared his skills in ASGM communities in Uganda, and a speaker on ASGM in Denmark soon</p> <p>Suggestion to include in the indicator:</p> <ul style="list-style-type: none"> Specific no. of miners who are using GCM now Specific no. of mercury-free ball mills or no. of mercury-free drums that are now ready to use or about to operate soon
<p>75% of women miners are trained in the mercury-free method</p> <ul style="list-style-type: none"> A total of 10% of miners (approx. 750) miners are trained in mercury-free gold extraction, health effects of mercury exposure, advocacy 	<p>South Cotabato: Baseline- 150 miners Target: 100 miners</p> <p>Jose Panganiban: Baseline -150 miners Target-75 miners</p>	<p>Kalinga: One (1) female miner is now a technical miner to miner trainer</p> <p>T'boli : 1 woman TMT developed in T'boli</p> <ul style="list-style-type: none"> 286 women miners (286%) of the target were trained <p>In Jose Panganiban - 176 women (234%) of the target were trained</p>	<ul style="list-style-type: none"> More women are participating during coaching sessions and showing greater interest in converting and applying the GCM process During FGD with women groups both in T'boli and Jose Panganiban, participants expressed appreciation for the learnings and skills imparted to them by the project Women expressed fear over the effects of mercury on their health especially on their children
<p>50% ASGM have converted to mercury free gold extraction methods</p>	<p>T'boli: Baseline - 5000 Target - 500-1000</p> <p>Jose Panganiban: Baseline - 3000 Target- 750</p>	<p>T'boli: around 89 miners (17.8% of the target) are in the process of converting to GCM</p> <ul style="list-style-type: none"> 28 miners are in transition to converting into mercury free gravity concentration method and of the 137 facilities, two (2) rod mill facilities are 100% mercury-free, five (5) facilities are in transition to mercury-free (i.e. changing the drums and sluice set-up for conversion); around thirty 30 rod mill facilities have reduced mercury use by only adding mercury after the milling process and not while in the drum <p>Jose Panganiban: 4 milling facilities (0.53% of the target) are now in transition to mercury-</p>	<ul style="list-style-type: none"> lack of resources/capital was the common cited reason for the slow conversion to mercury-free method Other cited reason is the availability and easy access to mercury However, they also mentioned that if the government will be really serious in enforcing the law prohibiting the use of mercury, then they have no choice but to stop and shift to other method <p>Comment on the target indicator – too high as change in attitude takes time to happen and is affected by many push and pull</p>

⁷ Kalinga was dropped in the middle of project implementation due to conflict with the local IP partner organization in the area.

OBJECTIVES (Indicators)	BASELINE and TARGETS	STATUS OF ACCOMPLISHMENT As of June 2017	REMARKS
		free method; + 1 facility already Hg-free and is operational (owned by a Charito E. Elano ⁸) Gaang, Kalinga – 95% conversion sustained according to BBTA in Gaang Mines, since the policy and penalties are in place for violations (Php25,000 and expulsion from the mine site); the 5% of the miners still opt to smelt their processed ore in Tabuk City through the gold buyer's station where mercury is offered for free. For this type of action, the BBTA shared that such actions are beyond the scope of their policies.	factors. Awareness does not guarantee or automatically result to change in behaviour; the target does not match with the objective – 50% ASGM (if the baseline is 5000 and 3000 ASGM, 50% is 2,500 and 1,500, respectively- quite high indeed)
50% of milling facilities are mercury-free	T'boli: Baseline - 80 facilities Target - 50 Jose Panganiban: Baseline - 75 Facilities Target - 25	T'boli: 33 or 44% of the target <ul style="list-style-type: none"> 4 facilities have converted 20-30% of their operations to mercury-free more than half of the remaining milling facilities have reduced mercury use by about 70 percent (i.e. from about 15g of Hg to about 3g of Hg per cycle) Jose Panganiban: 5 or 16% of the target; 1 fully converted <ul style="list-style-type: none"> 4 rod mill owners have partially converted, 4 facilities have converted 20-30% of their operations to mercury-free Gaang, Kalinga – 100% conversion sustained according to BBTA in Gaang Mines, since the policy and penalties are in place for violations (Php25,000 and expulsion from the mine site)	<ul style="list-style-type: none"> a full and sustained conversion remains a challenge usually, the medium scale ball mills are the ones who converted their facilities (e.g. Josephine Balonga in T'boli) quite a number of rod mill operators have slowly reduced their mercury utilization by introducing GCM before amalgamation due to the increasing price of mercury and due to the project's advocacy and IEC activities Comment on the target indicator – quite high for a 3-year time frame, requiring behavioural changes and investment. (check consistency of objectives, targets, and baseline - 50% of 80 = 40; 50% of 75 =38)
Provincial or Regional ASGM summit	<ul style="list-style-type: none"> 2 summits in Phase 1 1 summit/year 	<ul style="list-style-type: none"> there were already 4 ASGM summits, 2 of which were held under this project (Phase2) regional/provincial women and youth summit conducted 	Unintended outcome: <ul style="list-style-type: none"> formation of a national coalition of miners – a good opportunity to advance the rights of small-scale miners; to serve as a collective voice of miners on many issues affecting them
Objective 2 (Stakeholder Empowerment)			
90% of the health care workers have increased knowledge about mercury toxicity <ul style="list-style-type: none"> Health care workers have knowledge about mercury toxicity; can refer patients to relevant treatment; & advocating no mercury-agenda 	T'boli : Baseline - 42 Target – 38 Jose Panganiban : Baseline – No Data Target -42	T'boli - 28 (93.3%) out of 38 targeted HCWs were reached by the project's IEC activities on mercury toxicity and management Jose Panganiban- 42 (100%) of the 42 targeted HCWs have increased knowledge on mercury toxicity <ul style="list-style-type: none"> two (2) municipal health officers and two (2) nurses became Health Peer Educators on mercury toxicity. 	During KII and FGD with them – they were able to explain why mercury is bad, its health effects , symptoms of mercury poisoning, able to demonstrate application of what they have learned about checking for symptoms of mercury poisoning. <ul style="list-style-type: none"> Very appreciative/thankful to Ban Toxics and Dialogos for educating them about mercury Municipal Doctors have incorporated in their activities/project about mercury. In Jose Panganiban, every Buntis Day Celebration (for pregnant women), Orientation on the dangers of mercury is given every year. Doctors knowledge on mercury were also enhanced due to seminars/mtgs/orientation/learning visits facilitated by BT/Dialogos

⁸ Ms. Elcano is the president of the women's organization in her purok, the secretary of the women's federation in Jose Panganiban, and the secretary of the National Coalition for Artisanal and Small-Scale Mining in the country.

OBJECTIVES (Indicators)	BASELINE and TARGETS	STATUS OF ACCOMPLISHMENT As of June 2017	REMARKS
<p>1 women-miners-organisation is formed in each project area, or if there is an existing organization, this will be capacitated on the mercury use in ASGM issue</p> <ul style="list-style-type: none"> • have improved knowledge about mercury toxicity; advocates for no Hg agenda in their area 	<p>No baseline data in the 2 project sites</p> <p>Target: 1 women association per project</p>	<p>T'boli : 2 Women's Associations, 1 in Kematu and 1 in Desawo (200%)</p> <p>Jose Panganiban – 2 Women's Associations formed: one in Luklukan and 1 in Poblacion (200%)</p> <p>a successful conduct of a women miners' summit because of an inter-agency collaboration with Municipal Social Welfare and Development Office (MSWDO), Municipal Environment and Natural Resources Office (MENRO), and Provincial Environment and Management Office (PEMO)</p> <p>Gaang – women's organization formed</p>	<ul style="list-style-type: none"> • resulted in collaboration with other government agencies such as the Department of Labour and Employment (DOLE), Social Welfare and Development Office (SWDO), and the Department of Trade and Industry (DTI) for added support such as livelihood projects, organisational development training, and skills enhancement seminars. • Active participation of 40 women and two male miners in the Women Miners' Summit.
<p>75% of school children, youths and women have increased their knowledge about mercury toxicity</p> <ul style="list-style-type: none"> • Teachers, primary and secondary school children in the project areas have increased knowledge about mercury toxicity and alternatives to mercury in ASGM, and they advocate for the no mercury-agenda 	<p>T'boli: Baseline -6000 Target – 1200</p> <p>Jose Panganiban: Baseline -1000 Target - 116</p>	<p>IEC on mercury toxicity reached 3,717 students in the mining areas (total in three areas).</p> <p>T'boli - 2,600 or 217% of the target were reached</p> <ul style="list-style-type: none"> • BT's educational activities in 2 schools (Lugan and T'boli National High Schools alone has reached a total of 580 students (37% male and 63% female) <p>Jose Panganiban - 1025 (883% of the target) were reached</p> <p>Kalinga - Summer Youth Camp organized by the Municipal LGU. Around 92 youth leaders (52 Secondary and College students and 38 Out of School Youth) participated in the workshop - facilitated greater awareness among youth leaders in Balbalan.</p>	<ul style="list-style-type: none"> • Batang Bantay Toxics has been sharing their toxics free advocacy in different events such as Annual Recyclable Waste Fair organised by the Provincial Government of South Cotabato. They received invitations from other schools such as Notre Dame of Marbel to replicate their projects • Production of ten Digital Story-telling videos By Children Peer Educators depicting a story of hope and struggles of children living in a mining community. • Participation of eleven teachers participated in the Toxics-Free School Programme orientation (4 male, 7 female) • supposedly a avenue for BT to steer the formation of Youth Toxics Watch Group – was not materialized
<p>1 youth organisation is formed in each project area, or if there is an existing organization, this will be capacitated on the mercury use in ASGM issue.</p> <ul style="list-style-type: none"> • Youth have increased knowledge about mercury toxicity and alternatives to mercury in ASGM; they advocate for the no mercury-agenda in support of their local mercury committees 	<p>No baseline for both project sites</p>	<p>The project produced the following youth organizations:</p> <p>T'boli - Environment Stewards Organisation (ESO) - Batang Bantay Toxics (Kids Against Toxics) of T'boli National High School; 2 more youth organizations were formed in other schools</p> <ul style="list-style-type: none"> • Total membership – 2,600 <p>Jose Panganiban - youth group organized was with students under Alternative Learning School (ALS) in the mining areas. IEC activities and leadership trainings has reached 1,025 youth – spread in various barangays.</p> <p>Gaang – no youth group organized</p>	<ul style="list-style-type: none"> • Batang Bantay Toxics youth group with 500 members from Edward National High school • Batang Bantay Toxics have become resource persons in other schools on environmental issues, and implementing various environmental projects such as reforestation, clean up drive and lectures <p>According to BT, the local coordinator in Gaang was not really cautious and lacks initiative in achieving the project's targets in the area⁹. They also got reports from local partners that the staff in the area prefers to stay in Tabuk City and not in Gaang mining site where she should be doing organizing and engaging the target groups for the project.</p> <p>When BT received the reports from its local partners, it conducted project visits and monitoring and talked with the local</p>

⁹ During the phone interview with the local project coordinator in Kalinga, she mentioned that she has to wait and follow the long and dragging National Commission on Indigenous Peoples' process and that there's nothing she can do but to follow and respect their process. The project manager however, cited that it's not just about the NCIP process but the several instances where assigned tasks were not really done hence, the decision to replace her but such management decision resulted to conflict with the local IP partner organization and later on cancellation of the project in the area.

OBJECTIVES (Indicators)	BASELINE and TARGETS	STATUS OF ACCOMPLISHMENT As of June 2017	REMARKS
			coordinator which in the end led to the dismissal of the staff.
<p>50% of youth are organized or belong to an organization representing their interests.</p> <ul style="list-style-type: none"> The entire project area community is strengthened through improved awareness on mercury toxicity. 	<p>T'boli: Baseline - 2600 Target –none</p> <p>Jose Panganiban: Baseline – none Target - none</p>	<p>T'boli – formation and membership of 2,600 (100%) high school students to Batang Bantay Toxics groups in T'boli National High School and Edwards National High School was facilitated.</p> <p>Jose Panganiban - formation and membership of 1025 school-based and community-based Batang Bantay Toxics youth members – covering 7 mining villages .</p> <p>Gaang – no youth group organized</p>	<p>The youth proved to be effective agents of information aside from being energetic, passionate they are very creative and idealistic. Their energy is contagious. This is the reason why they have many activities and were able to convince more students in other schools/communities.</p> <p>Having a dedicated teacher moderator/mentor is very crucial in keeping the organization functional/active.</p>
<p>75% of out-of-school youth and Youth Council members have increased knowledge about mercury toxicity;</p> <ul style="list-style-type: none"> A mercury committee or equivalent exists and functions in all project areas 	<p>T'boli: Baseline - none Target - 100</p> <p>Jose Panganiban: Baseline - none Target - 100</p>	<p>T'boli - around 28 out of school youth are now members of the community-based Batang Bantay Toxics group. They are the children of miners who are currently engaged in mining related work in the community. (28% of the target)</p> <p>Jose Panganiban - 361 out of school youth participated in the series of Environmental Leadership Training organised by BAN Toxics in 5 mining villages. In partnership with the teachers of the Alternative Learning System, a programme for out of school youth by the Department of Education (361% of the target)</p> <p>Gaang – no out-of-school youth group formed</p>	<p>One difficulty encountered is the absence of data on the exact number of out of school youth in T'boli</p> <p>For both areas, there is difficulty in actively engaging the out of school youth, since they are working full-time or have day jobs. Most of them are also child labourers and engaged in mining related work</p>
<p>25% of out-of-school youth and Youth Council are members of Batang Bantay Toxics initiative.</p>		<p>T'boli - around 28 out of school youth are members of the Batang Bantay Toxics.</p> <p>Jose Panganiban around 361 ALS learners are members of Batang Bantay Toxics.</p>	
<p>1 well-functioning mercury committee is present in each project area</p>	<p>Baseline - none</p>	<p>T'boli and Jose Panganiban have set up its mercury committee which provided greater support in the local action planning cum sustainability planning for mercury reduction, practice of mercury free method and policy advocacy.</p> <p>The MMT is doing regular monitoring in the mining areas and they were able to confiscate some mercury. However, he also admitted that enforcement of the EO 79 was not also strict as a viable alternative does not exist yet especially for medium-scale ball mills.</p>	<p>BT did not form another group but maximized the existence of Multipartite-Monitoring Team (MMT) in South Cotabato - it is composed of the Environment and Natural Resources Office - both municipal and provincial levels, the Municipal Health Office, Municipal Social Welfare and Development Office, as well as representatives from the LGU and Batang Bantay Toxics</p> <p>The MMT/Mercury Committee is very crucial towards sustainability of the efforts to stop or reduce mercury use in gold extraction</p>

Objective 3 (Sustainability)			
<p>Each project area has developed and adopted a local sustainability plan.</p> <ul style="list-style-type: none"> a local no-mercury sustainability plan. 	<p>Baseline : No sustainability plan in the 3 project sites</p> <p>Target: 1 per project site</p>	<p>T'boli: signed memorandum of understanding and a joint action plan to pursue mercury-free gold mining initiatives in T'boli People's mining area.</p> <ul style="list-style-type: none"> a 3-year plan was drafted at the onset of project intervention in 2014 draft local action plans for mercury elimination and management <p>Jose Panganiban : draft local action plans for mercury elimination and management</p> <p>Kalinga: one-year action plan for Gaang has been drafted</p>	<p>BT is now finalizing the packaging of the Sustainability Plan/project site.</p> <p>The seeds planted by the project are towards the sustainability of the efforts for a mercury-free environment : critical engagement with various government areas; technical miner trainer on GCM; youth groups, women, and a national coalition advocating for safer mining practices, strict enforcement of laws prohibiting mercury, and declaration for Minahang Bayan, formalizing miners' association empowering them to sustain what the project has started</p>
<p>The project has developed a concept and manual for sustaining positive changes in the project areas</p> <ul style="list-style-type: none"> Improved operational handbook 	<p>Baseline – none to all project sites</p> <p>Target : 1 incorporating all the lessons from all project sites</p>	<p>A learning manual is in progress¹⁰.</p>	<p>This is a good resource/reference material especially in replicating/scaling-up the project in other areas</p> <p>The project should allow for the completion of this as this will be a very useful contribution of the project not only here in the Philippines but in other areas with similar conditions/practices in ASGM</p>
<p>The project has developed a strategy and a manual for scaling up the program to other areas in the Philippines and for other countries as well.</p> <ul style="list-style-type: none"> Sustainability handbook 		<p>White Book or a learning document is in progress¹¹</p> <ul style="list-style-type: none"> draft sustainability plan/3 year Action Plan 	<p>Having the said kind of manual will encourage other players to come in to replicate in other ASGM areas that cannot be covered anymore by Ban Toxics. This will be BT's and Dialogos' legacy/contribution in the efforts to reduce/eliminate mercury while helping small-scale miners' issues be documented, discussed and acted upon</p>
<p>Participation at the Technical Working Group of the Philippines on ASGM and National Steering Committee</p> <ul style="list-style-type: none"> Scaling-up handbook 		<p>Two (2) TWG meetings conducted - discussed roles and responsibilities; inclusion of child labour and working conditions in ASGM; creation of subcommittee headed by the Department of Labour and Employment and Department of Social Welfare and Development.</p>	<p>The formed national coalition of miners should be represented in the National Steering Committee and TWG on ASGM – as a good strategy to sustain policy advocacy work on ASGM.</p>
<p>Participation at the UNEP ASGM Partnership</p> <ul style="list-style-type: none"> Linking project to National ASGM Technical Working Group (TWG) and National Steering Committee (NSC) Linking project to UNEP ASGM Partnership 		<p>Active participation of Ban Toxics in the Mercury Partnership meetings organised by UNEP.</p> <p>The Executive Director of BAN toxics participated in the Minamata Convention meeting in Bangkok early March 2017 and learnings from this project has helped him pushed for some provisions in the Minamata Convention concerning ASGM</p>	<p>BT is doing great on this and hence, should be sustained as this is crucial in broadening and diversifying interventions to ASGM communities with the same ultimate goal of creating a safe world for all and improving the life condition of small-scale miners.</p> <p>Continue expanding networks with other ASEAN neighbors (such as Cambodia, Mongolia, etc.) and other countries with similar ASGM conditions.</p>

¹⁰ According to BT, it was agreed during the last area visit of Dialogos that this manual will be submitted by mid August as all learnings especially those stated in the evaluation will be part of this Learning Manual.

¹¹ Same update from BT that the re Learning and Scaling-up Manual shall be submitted after the project to also incorporate the results of the evaluation.

Annex 6 – Narratives

Narrative 1

As a woman miner in Gaang Mines and trainer, Zen realized how women from other mining communities such as Camarines Norte and South Cotabato felt empowered because of her presence in the trainings conducted by Ban Toxics. In Jose Panganiban, for instance, she saw how she was able to influence the women in an IP community who were hesitant to take part in the training since it was the men who usually represented their community when dealing with the community's guests or visitors. To be more exact, she noticed that when doing the course of panning and demonstrating the GCM, the women in the village were stationed from a distance watching with great curiosity. Signaling them to come near, the IP women on-lookers eventually took part in the demonstration process. It was a moment that Zen took full advantage of as she reminded them that a woman like her can be a miner trainer, and that they should not be confined to their household chores. In fact, Zen explained to them that they can help sift excess gold from processed ores by using water with soap from their laundry work. In this way, these women can earn money and in turn, add income to the family. Looking back at such experience, Zen expressed: "I find fulfillment with my work as a trainer given the influence I had on IP women in Jose Panganiban, Camarines Norte, and in T'boli, South Cotabato."

- *Zenaida Magbayac, Women Miner Trainer, Balbalan, Kalinga*

Narrative 2

Charito Avellano Elcano (aka, "Ate Chat"), 59 years old, worked as a government employee at the Fiber Industry Development Authority in Catanduanes from 1973-1988. In 1988, she resigned from work as she had to attend to the schooling needs of her children.

In 1990-1991, her family engaged in mining in Barangay Luklukan, Jose Panganiban, Camarines Norte, using Mercury in their ball mill operation. For fear of being robbed, her family would process gold using Mercury on the ground floor of their house. Since their second floor was made of light wood materials, they would see residues of Mercury on their stairs and floor as well as on leaves of plants/trees in their surroundings whenever they heat Mercury to extract gold from the amalgam.

One day, his brother heated 10 kilos of Mercury to extract 8 kilos of gold. Because his brother was the most exposed, he coughed severely for days, eventually got sick, and died of cardiac arrest. According to Ate Chat, her family saw traces of Mercury in his brother's phlegm. Years later, her 18 years old son, who was exposed to Mercury for a long period, also eventually died due to Mercury poisoning, with traces of the chemical found in his heart. Ate Chat likewise related the story of her nephew who was initially observed to have mood and behavioral disorder in school and who eventually suffered from Parkinson's disease.

After the tragic death of his brother and son, Ate Chat's family moved to Pasig City in Metro Manila and settled there from 1992 to 2015. She was not very aware of Mercury toxicity then, and she kept quiet for a long period because she wanted to forget about her family's tragic experience in her barangay.

It was only in 2015 when her family returned to Barangay Luklukan to tend to their family's farm when she met BT that her attention on the Mercury issue has been revived. Owing to her learnings from BT's aggressive IEC and advocacy work, she ultimately got involved in BT's activities as a peer educator, enabling her to share information with the people in her community on Mercury's health and environmental hazards.

At present, Ate Chat, who now owns an operational Mercury-free ball mill in her barangay, is the president of the women's organization in her purok, the secretary of the women's federation in Jose Panganiban, and the secretary of the National Coalition for Artisanal and Small-Scale Mining in the country. These positions have empowered her to advocate for a Mercury-free environment in Jose Panganiban and beyond.

Narrative 3

Dolores “Neneng” Gonzales is a Barangay Nutrition Scholar (BNS) in Barangay Poblacion, T’boli for the past twenty-five (25) years. Having participated in a seminar conducted by Ban Toxics on the harmful effects of Mercury in 2016, she shared a narrative which encapsulated the impact of her new-found knowledge to her work and community. Recognizing how Kematu River flows into River Safali, she discussed and advised her neighbors to stop washing their cooking utensils and kitchenwares using deep-well water near the river, and to limit, if not abandon, their practice of washing their clothes in it. Neneng explained that Safali River may already be infused with Mercury since Kematu River has been a host to tailings coming from tunnels in Purok Ipil-Ipilan and El-Lubog in Barangay Kematu. Dolores feared that the water in Safari River and from their deep-well may no longer be safe to use. Explaining to her neighbors how Mercury accumulates in land, water, and air, and how it slowly affects one’s health, her entire neighborhood of ten (10) households with ten (10) families or thirty (30) individuals decided to apply for a water connection. From the thirty (30) individuals in her neighborhood, she notes that twenty (20) of these are children which include her five (5) children. Eager to note how her knowledge has helped change her small neighborhood, she continues with her task as a BNS visiting at least thirty (30) households each month, and sharing her knowledge with the four (4) other BNS in Barangay Poblacion. In her own words, “Dako ug tabang ang Ban Toxics kay gipabalo nila na ang Mercury ga-amat-amat ug patay sa atua lawas” (Ban Toxics has been of big help since they explained how Mercury slowly kills the body).

Narrative 4

Our house is located in the ball mill area, and my father used to be a miner. I experienced handling Mercury with my bare hands. During gold panning, I had seen how my father used to mix Mercury using his fingers. Since becoming a member of Batang Bantay Toxics, I have attended a seminar in Davao where I finally understood why Mercury is unsafe and its ill-effects on both health and environment. I also realized that the rivers in the municipality are contaminated with Mercury. Given such knowledge, I discussed with my father why he should stop using Mercury. I also showed him a video to help him understand the effects of the chemical. Since then, my father has opted to work as a motorcycle driver. I am proud that change can start from me. Through lectures, I realized I can do more by sharing my ideas with others.

- Batang Bantay Toxics (BBT) member

Narrative 5

Rizalde “Nono” Perez’s life as a small-scale miner changed in November 18, 2014. This is a date which Nono clearly remembers since it was on such day when he first participated in a lecture provided by Ban Toxics in T’boli. As Nono shared, “It was on such day when I finally understood how Mercury harms the environment and one’s health.” Since such awakening, Nono has decided to convert his ball mill facility into a Mercury-free processing plant. His facility has then served as his launchpad to his radical transition into a master trainer of Mercury-free GCM. To date, he has received international visitors—Indonesians, Mongolian, and Mozambicans—who desire to learn how the Mercury-free method operates. He has travelled to Cambodia (2016), Uganda (2017), and soon to Denmark so he can transfer his knowledge to other small-scale mining operations in these countries. With the breadth of trainings he has conducted in the past three (3) years, Nono has definitely come a long way. From a mining operator who has been consumed by the pleasures of monetary rewards of high-grade gold ore mining since 1988 in T’boli, he has learned to abandon such desire for wealth with a conviction to protect the environment from harmful toxics, such as Mercury, starting off in his municipality and moving towards other areas in the country and abroad.