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MEASURING BEHAVIOR CHANGE RESULTING FROM EORE AND THE NEED FOR COMPLEMENTARY RISK REDUCTION ACTIVITIES

By Helaine Boyd [HALO], Sebastian Kasack [MAG], and Noe Falk Nielsen [NPA]



FGD with a mixed community group in Olmun Village, Battambang Province, Cambodia. Good notetaking and facilitation are key. Photo courtesy of © Sean Sutton/MAG.

Risk education (RE) in mine action has been around since 1992.¹ However, explosive ordnance risk education (EORE)² operators are still struggling to measure how and whether EORE has resulted in positive behavior change.³ Of course, various monitoring and evaluation (M&E) methods have been pursued in the past, predominantly the use of knowledge, attitude, practice, and beliefs (KAPB) surveys; simpler pre-/post-EORE session surveys; the use of proxy indicators such as number of explosive ordnance (EO) accidents or victims; and number of explosive ordnance disposal (EOD) callouts from the community. However, these methods come with some limitations in accurately capturing behavior change. For example, survey questions linked to behavior would normally be prefaced as “what would you do if...” However, this self-reporting of behavior does not necessarily capture actual behaviors; moreover, responses may be biased toward giving the “correct answer” in order to please the organization conducting the survey. Further, research has evaluated the limits of EORE in the context of ongoing conflict, high levels

of poverty, and/or insufficient clearance/ordnance disposal capacity. These circumstances lead to a lack of choices for persons living in or near an EO-contaminated environment to adopt safer behavior.

This article presents a new approach to measuring behavior change, using a combination of qualitative and quantitative survey methods. It is centered around conducting focus group discussions (FGDs) pre-/post-EORE interventions at the community level. The approach is showing positive results after an initial round of piloting and implementation in ten countries (Angola, Burma, Cambodia, Laos, Lebanon, Somalia, South Sudan, Sri Lanka, Vietnam, and Zimbabwe) for the past eighteen months, but it is not without its challenges.

REASONS FOR DEVELOPING THIS METHODOLOGY

The HALO Trust (HALO), Mines Advisory Group (MAG), and Norwegian People’s Aid (NPA) are partnering together as part of the UK Department for International Development’s (DFID) second Global Mine Action Programme (GMAP2), which runs from 1 July 2018 to 31 March 2021 and covers the ten countries listed previously.



HALO staff conducting a focus group discussion with a mine-affected community in Anlong Veng District, Cambodia. Photo courtesy of The HALO Trust.

While the “Partnership” had agreed on a standardized EORE pre-/post-survey approach in GMAP1, we realized methods for systematically measuring behavior change, particularly at a community level, were inadequate.⁴ Difficulties in measuring behavior change during GMAP1 led the UK government to recommend the three organizations to seek improved ways of measuring the effects of EORE. Itad, an external organization contracted to provide monitoring and evaluation of the Partnership’s work under GMAP, had written a summative evaluation report for GMAP1 that recommended “to really deliver behavioral change, better analysis is needed that leads to nuanced delivery of MRE.”⁵

From this, the Partnership developed the following indicator to measure behavior change for the GMAP2 contract: “Percentage of impacted communities surveyed reporting an increase in people who behave in a safer manner (as a consequence of EORE).”

The Partnership began piloting a qualitative approach to measure behavior change through FGDs as this methodology would (a) allow for open discussions in small groups between five and twelve people to ask follow-on questions and explore topics in-depth (b) be more representative of the community’s behavior rather than individual behavior, and (c) allow participants to report observed behaviors of other community members, which would not be possible from a quantitative KAPB survey. FGDs allow implementers to draw upon respondents’ attitudes, feelings, beliefs, experiences, and reactions in a group setting.^{6,7} By focusing on select age, social, and gender groups, FGDs can create an atmosphere where people feel free to talk. Further, by having a specific, thematic focus on behavior towards EO, this also provides a concise parameter for discussion.

While mine action operators are used to conducting group interviews and FGDs in other areas related to humanitarian mine action,

the Partnership felt that we had not fully utilized FGDs in a comprehensive, rigorous manner to assess behavior change with respect to EORE. Key questions included: How were we going to produce a quantitative score to a qualitative-heavy methodology? How will we capture EO-related behavior of an entire community? We realized that rolling out this methodology was not going to be easy and would require additional training of our in-country community outreach teams (COTs)⁸ in order to capture the nuance of varying behaviors and the underlying motives across differing sub-groups within communities.

DEVELOPING THE METHODOLOGY

Core parameters were quite clear: the COTs would conduct FGDs before the delivery of EORE sessions in a given community and then again

about three-to-six months after the EORE intervention.

As it was the first time that this outcome indicator was used in DFID’s GMAP, there was an element of “piloting” M&E for this indicator in the first three months of the project. Following this baseline phase, a lessons learned document was produced to catalogue all challenges and limitations in order to refine the methodology. The exercise determined that one FGD per community is not enough and if possible, multiple FGDs should be conducted with distinct groups, such as local leaders, women, youth, and/or specific risk-takers such as shepherds. Country contexts are wide-ranging during conflict, post-conflict, and in-development; and community acceptance of mine action activities and participatory approaches can vary widely depending on these circumstances. The capacity of our COTs also varied significantly. Too many of our staff were used to asking suggested questions in a script-like fashion, and did not probe deeper; and most importantly, they asked leading questions and judged participants’ answers. Initially, we had envisioned that the FGD methodology would have a sample size of 20 percent of all communities where EORE is being conducted under the GMAP2 contract. However, it was later found that for some countries this was an overwhelming burden

Examples of some of the open-ended questions include:

- » What do you consider are safe behaviors towards EO?
- » What are unsafe behaviors?
- » What do you do when encountering explosive ordnance in contaminated areas?
- » What reasons, if any, prevent you from taking a safer approach to the explosive ordnance threat?

There are approximately nine to ten questions asked in each FGD, with the potential for numerous follow-up questions depending on the responses given.

Scoring Matrix (on a scale of 1–5, 1 being very unsafe to 5 being very safe)		
#	The FGD exhibits the following behaviors/overall assessment	Examples
1	FGD participants/community members are knowingly engaging in very unsafe activity/or it is implied that this activity is still happening, despite no strong reason for economic necessity. (the Reckless) FGD participants/community members engage in unsafe behavior because they are mostly not aware of the threat. Common belief that EO is not dangerous. (the Unaware) No one, or very few members in the community/FGD participants are engaging in actively safe behaviors (reporting to authorities, warning others not to enter suspected dangerous areas)	<ul style="list-style-type: none"> Refugees or IDPs in a conflict affected country moving into contaminated areas without any knowledge of RE messaging Ex-military or young boys who are reckless and refuse to believe EO is dangerous Scrap metal collectors/explosive harvesters
2	FGD participants/community members are aware of the threat, but do not know sufficiently how to behave more safely. (the Uninformed) FGD participants/community members knowingly use contaminated land (not applicable for cluster strike areas) due to economic desperation, but may use well-trodden pathways while doing so to avoid hazards. (the Forced) Very few, or at least less than the majority of members in the community/FGD participants are engaging in actively safe behaviors (reporting to authorities, warning others not to enter suspected dangerous areas)	<ul style="list-style-type: none"> Poor communities using the land for cultivation out of desperation Women/vulnerable groups who are isolated in rural communities and do not receive adequate RE
3	A majority of FGD participants and other community members do not actively use the contaminated land; they seek safer areas for their livelihoods; unsafe behavior seems to be out of a misunderstanding of key RE messages or lack of trust of clearance response (i.e., moving an item to a tree or landmark to avoid the item being in the pathway of someone else) (the Misinformed/Forced) or fear (i.e., when an item is found, it is no longer picked up, but communities may not report to authorities out of fear of retribution). Half or a small majority of members in the community/FGD participants are engaging in actively safe behaviors (reporting to authorities, warning others not to enter suspected dangerous areas)	
4	FGD participants/community members do not report any unsafe behaviors, hazardous areas are avoided, and people who did unsafe practices in the past have stopped doing so. A large majority of members in the community/FGD participants are engaging in actively safe behaviors (reporting to authorities, warning others not to enter suspected dangerous areas)	
5	FGD participants/community members report mostly safe behaviors, and have actively and consistently reported items to authorities; they warn their children and newcomers about the threat. All or at least a 90% majority of members in the community/FGD participants are engaging in actively safe behaviors (reporting to authorities, warning others not to enter suspected dangerous areas)	<ul style="list-style-type: none"> Communities with legacy contamination who have been living with mines for a long time and have a well-established reporting response mechanism to authorities

Table 1. Scoring matrix (on a scale of 1 to 5, 1 is very unsafe, 5 is very safe).
Table courtesy of authors.

on COT planning and would threaten the delivery of EORE session targets in some cases. Jeopardizing the humanitarian objective of the project was not an option. The sample size was thus redefined as “up to 20 percent of communities” to allow for some flexibility.

Specific and comprehensive guidelines were developed following the lessons learned exercise. Notably, better guidance was needed to properly train COTs. For example, finding the exact same participants for post-EORE FGDs is no longer binding to allow for some flexibility when gathering participants for the post-EORE FGD, as long as they had participated in the EORE session in the first place.

Analyzing the results of each FGD and then for the entire community may possibly be the riskiest part of this approach. The reasons for ranking a community in relation to its behaviors toward EO must be well explained. The matrix itself along with the guidance will likely need to be refined over time as more lessons are learned.

THE METHODOLOGY

The FGD methodology allows for capturing qualitative information, which is imperative in measuring behavior change through a quantitative scoring process. COTs raise with the participants a series of core topics, each with open-ended and follow-up questions, with the purpose of obtaining detailed information on behavior toward EO in the community. Examples of some of the open-ended questions include: What do you consider are safe behaviors towards EO? What are unsafe behaviors? What do you do when encountering EO in contaminated areas? What reasons, if any, prevent you from taking a safer approach to the EO threat? There are approximately nine to ten questions asked in each FGD, with the potential for numerous follow-up questions depending on the responses given.

From there, the COTs record comprehensive notes of the FGD. These notes are then immediately analyzed by the facilitator and note taker,

State/ Region	Teams	FGDs	1st Round Community Safety Score					2nd Round Community Safety Score				
			1	2	3	4	5	1	2	3	4	5
Shan	1	9		3	3	3			1	8		
Kayin	2	12	1	1	9	1		1	2	7	2	
Tanintharyi	2	36		6	11	19		1	1	2	32	
TOTAL	5	57	1	10	23	23	0	2	3	20	42	0
			1.8%	17.5%	40.4%	40.4%	0.0%	3.5%	5.3%	17.5%	73.7%	0.0%

Table 2. MAG FGD analysis in Myanmar. Number and absolute scores of FGDs before and after conducting EORE.

State/ Region	Communities	Lower Score	Same Score	Higher Score
Shan	9	0	3	6
Kayin	12	4	5	3
Tnintharyi	36	3	17	16
TOTAL	57	7	25	25
		12%	44%	44%

Table 3. MAG FGD analysis in Myanmar. Comparison between pre-EORE and post-EORE FGD scores.

with non-biased analysis provided by a senior member responsible for community liaison and EORE. The person responsible for analyzing the FGD data then produces a summary paragraph explaining the current state of behavior towards EO. This summary may include identifying the risk profiles of a community, with the understanding that multiple risk profiles may be present in a community at any given time. Risk profiles are broken down into five categories and can be ascribed to individuals but also groups, ranging from **Unaware, Uninformed, Misinformed, Reckless, to Forced**.⁹

SCORING SYSTEM

The scoring matrix ranks communities on a scale from one to five: from a very high risk-taking community (#1) to one where a majority of members in the community conduct safe behaviors related to EO (#5).

It is important to note that this scoring matrix comes with a number of caveats that are detailed in the overarching FGD guidance document.¹⁰ Primarily, scoring of an FGD session should be done with the understanding of whether a majority or minority of community members carry out safe or unsafe behaviors toward EO. We have termed this the “none/some/all” approach to scoring. Further, the scoring of the post-EORE FGD three-to-six months later should be mindful of the summary paragraph from the pre-EORE FGD to see if the amount of community members exhibiting unsafe behaviors has reduced since the EORE session. Without this general quantifying of community members, it will become difficult to give a realistic score as it is quite likely for a community to exhibit both safe and unsafe behaviors at the same time.

OUTCOMES: SUCCESSES AND CHALLENGES

A positive outcome from using this methodology has been that it has increased trust between affected groups and mine action operators in communities, which has been significant in the context of Myanmar, where conflict sensitivity is paramount.

Talking about EO in Myanmar is still a very sensitive subject, even in areas where there has been no fighting for years. MAG Community

Liaison staff conducted pre-EORE FGDs in eighty-three communities in three different States/Regions and post-EORE FGDs in fifty-seven of these communities (see Table 2).

Although there are still two communities that reported knowingly engaging in unsafe behaviors (Category 1), there has been a 12.2 percent decrease in the number of communities knowingly engaging in unsafe behavior out of survival imperatives (Category 2), and a 22.9 percent decrease in the number of communities that report examples of unsafe behavior stemming from ignorance or fear (Category 3). In the second round of FGDs, 73.7 percent of targeted communities did not report any unsafe behaviors but did not consistently report items to authorities (Category 4), a 33.3 percent increase from the first round.

A surprising result showed 12 percent of targeted communities received a lower score in the post-EORE FGDs than in the pre-EORE FGD. In three out of seven of these villages, there were incidents of community members engaging in risky behavior despite having received EORE. In one notable incident, a local pastor who had received EORE was ploughing a field with a group of young men who had not received EORE when they encountered an item of unexploded ordnance (UXO). Instead of sharing key safety messages and warning them to not touch the item, the pastor played with the EO, throwing it to the other men he was with, as was reported in one FGD. The remaining communities have a lower score in the post-EORE FGDs, not because the communities are behaving in a more unsafe way since they attended an EORE session but rather because the participants were not forthcoming in discussing risky behavior when MAG Community Liaison teams conducted the pre-EORE FGD. A key lesson learned is that the data gathered in the first FGD might not always be fully representative due to initial lack of trust. However, the FGD process was invaluable in building relationships with the local communities, particularly in highly-militarized villages,¹¹ and communities often participated more freely in the post-EORE FGDs. Being able to directly address what the participants have been told in the FGDs helps to make future EORE more tailored and hopefully for the messages to sink in more. The process of having a discussion makes the community address the challenges together and understand whether they have different beliefs about what to do. This is helpful because if unsafe practices are identified, then the elders can specifically take ownership over not allowing this to happen in the future.

In Somaliland, seven out of the eight communities who have participated in both a pre-/post-EORE FGD conducted by HALO have reported positive behavior change, with only one exhibiting no change in behavior. This particular community who did not exhibit more



FGD conducted by NPA in the village of Kimunza Nzadi, Angola.
Photo courtesy of NPA.

positive behavior following EORE continued to report identified EO and spread awareness as they had done previously but struggled to convey key messages to nomadic populations. Further, while the FGD methodology can build trust in certain communities, it can also have the opposite effect in some contexts where communities exhibit survey fatigue. In some communities in Somaliland, people have been waiting for clearance for almost twenty years and are frustrated that clearance has not yet started in their community.

There are several FGDs that HALO in Somaliland did not end up using for analysis because (a) the data was insufficient or (b) biased answers or leading questions were suspected. In these instances, the information is still used for qualitative purposes and future EORE project design, but the statistics are not included when reporting on the outcome indicator. As this methodology takes a lot more time than other types of M&E methods due to the nuance required, it is important that all operators conduct continual monitoring and quality assurance of the COTs to ensure that high-quality qualitative information is being collected for FGDs or confirm that the information is unusable for scoring.

Overall, the FGD methodology in Somaliland has proven to be hugely successful. The notes produced from the FGDs illustrate that communities have exhibited greater awareness of behavior towards EO among community members, and that conducting the FGDs allows COTs to stay a bit longer, build trust, and has resulted in more people reporting items found or stockpiled at home. While the primary objective of the FGDs is to understand behavior change, they have proved to be great centers of debate, and provide the COTs with valuable, contextual information, which has then been used to tailor future EORE sessions to specific groups and where it is most needed.

In **Cambodia**, HALO has conducted 20 complete pre-/post-EORE FGDs of which eleven communities have reported increased safer behavior. The challenge with ongoing EORE in Cambodia is that much like other legacy contamination countries, it is understood that behaviors may not have changed for many years as some have adapted over time to risky or forced behavior because of the lack of alternative options to livelihoods.

In **Zimbabwe**, NPA is working mainly along the border with Mozambique. The mines emplaced along this border impede the

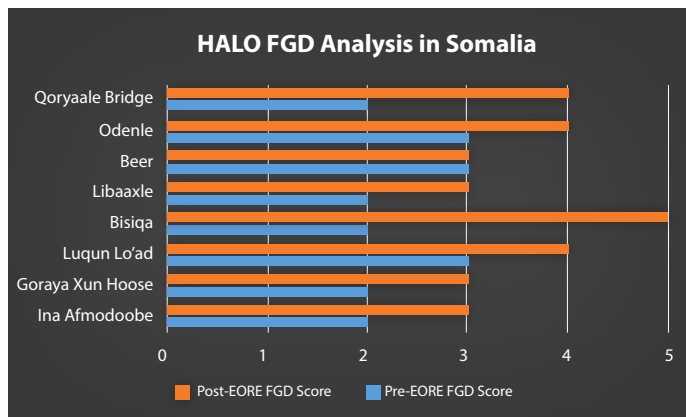


Figure 1. HALO FGD Analysis in Somalia.

access of small scale and commercial farmers as well as timber companies to manage forestry.

NPA has applied the FGD methodology since 2018 with guarded success. The FGDs have provided NPA with valuable information for understanding the differences in vulnerability, roles, and needs of the respective age groups, sex, and traits in the communities, allowing the program to improve planning and EORE quality accordingly.

Despite the benefits of the approach, NPA has experienced a number of challenges in the implementation. Large parts of the population are seasonal workers, which makes it difficult to keep track of the same group of people for between three and six months for the post EORE FGD. In addition, working adults have shown limited interest in dedicating the required time for FGDs, making it difficult to ensure representational participation.

As for the actual discussions, NPA occasionally experienced that the community provided COTs with the “correct answers” while continuing to practice unsafe behavior, e.g., cultivating crops in contaminated areas for economic reasons. Thus, the method requires the building of sufficient trust to ensure the community is open to talk about its needs and reasons for undertaking unsafe behavior. Follow-up visits to contaminated areas to verify that the community follows its own stated behavior may be an option to validate FGD findings.

Such cases illustrate yet again that the mine action sector needs to work closely with other sectors, i.e., development NGOs, authorities, etc., in order to ensure positive behavior change by offering people

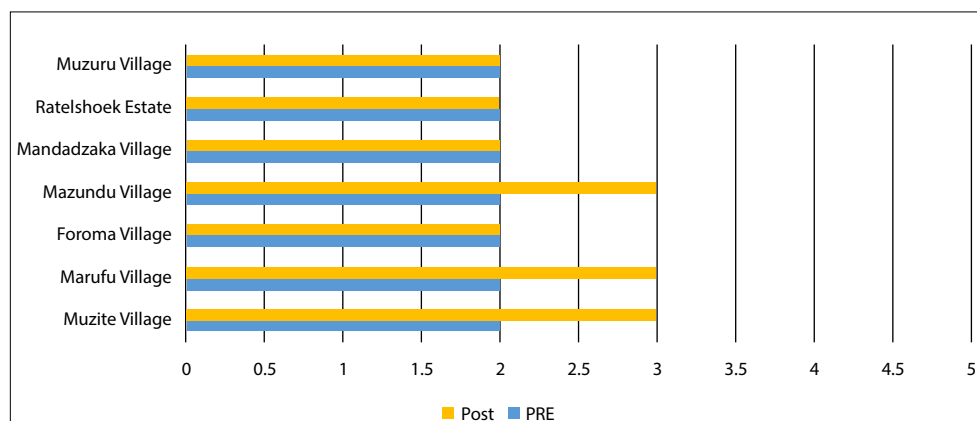


Figure 3. NPA FGD Analysis in Zimbabwe.

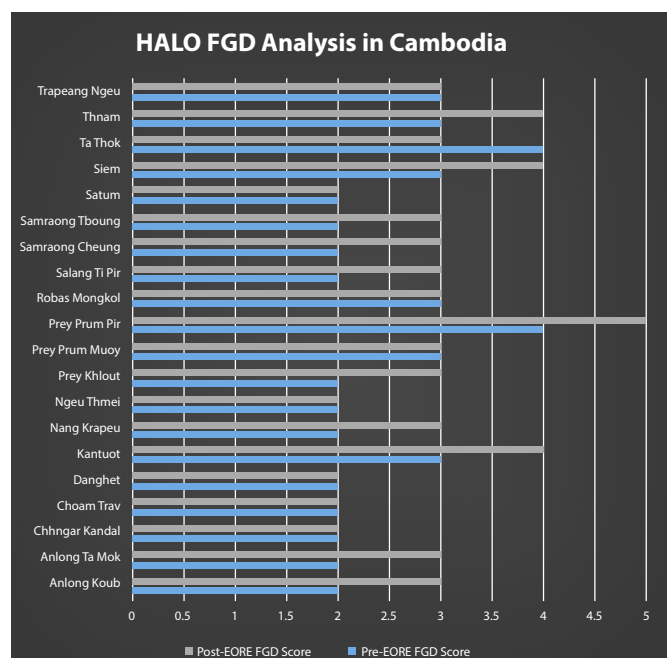


Figure 2. HALO FGD Analysis in Cambodia.

something beyond mere advice on safer behavior. Structural causes must be understood and addressed. As such, it is important to take note of the lack of fully honest answers and stated answers versus actual behavior change. NPA also noted that the rigidity of the scoring did not allow for the program to report on subtle changes in stated behavior resulting from the EORE sessions. As illustrated in Figure 3, three out of seven communities showed positive changes in pre-/post-EORE sessions. The program highlighted that even though the level of understanding of the threat was raised, a majority of people within the community continued to undertake unsafe, forced behavior, leaving the score unchanged. Thus, without proper explanation, the statistics will convey a somewhat incomplete picture of the impact. However, this is only a reporting issue. The FGD clearly showed that the program would have to link in with other sectors to properly address the forced unsafe behavior as EORE in itself would not be a sufficient measure. Broader reach of the FGDs, or discussions jointly undertaken with other sectors could lead to a better understanding of the keys to change behavior.

EO RISK EDUCATION AND EO RISK REDUCTION

People opt for dangerous behavior when they see no other choice. For example, when sourcing drinking water, gathering firewood, or finding areas for hunting, these may only be reached by passing through a minefield, thereby knowingly putting their lives at risk to sustain their livelihoods. Children may not know or simply forget safe behavior; for instance when they stray playing hide and seek, but this is something

that can be more easily addressed through EORE and attention from well-informed parents, siblings, and friends.

Some groups, like ex-combatants and those designated as “village deminers” will often deliberately, recklessly take very high risks to enter hazardous areas to remove EO. They do this to support other villagers or to make a bit of money. Farmers and shepherds come across numerous items of EO in certain countries. Often, they decide to move the items themselves, motivated by protecting their children or their livestock. Why do they not report these EO items to the local authorities instead of putting themselves at risk? Perhaps because the response takes too long, or out of fear of reprisal. FGDs help to find answers to these questions and to explore more relevant and realistic suggestions to behavior change—suggestions that are community-driven and context specific.

Other behavior proves even more challenging to address. For example when people keep EO with a profit motive in mind: children in Laos have sold cluster munitions so they have money to buy ice cream; to harvest explosives for blast fishing (a very destructive practice for the environment)¹² or to blow up stones/rocks; to harvest high-value metals from EO; or simply to use EO as construction material. How can we reduce the risks by persons who are either forced to continue this behavior or see no reason why they should stop their reckless behavior, often putting bystanders including family members at unacceptable risk?

Effective risk reduction¹³ must go beyond “just” EORE and should include options for safer alternatives to livelihoods in affected communities. For example, a safe playground may be built to reduce children playing in unsafe areas, firewood as fuel can be reduced by 50 percent when using fuel-saving stoves, and drilling a borehole may stop people from going through the minefield to the river to collect water. These alternative projects may be best placed in certain communities while inappropriate in others, so context is key. Some mine action operators may not have capacity to implement these projects directly, so partnering with wider relief and development organizations may be essential. For the post-EORE FGD we added a question on why some behavior did change or did not change for this exact reason.

CONCLUSION

Using FGDs to measure behavior change has worked but has its limits when applied within a short timeframe of three-to-six months after an intervention. Sustained behavior change will only manifest itself over time and, therefore, must be planned and implemented beyond any donor funding cycle.

The Oslo Action Plan, agreed upon at the fourth review conference of the *Anti-Personnel Mine Ban Convention* in November 2019, aims to steer the mine action community for the coming five years. It calls for risk reduction in the context of EORE:

Action point 28: “Integrate mine risk education activities with wider humanitarian, development, protection and education efforts, as well as with ongoing survey, clearance and victim assistance activities to reduce the risk to the affected population and decrease their need for risk-taking.”¹⁴

Action point 30: “Prioritise people most at risk by linking mine risk education and reduction programmes and messages directly to an analysis of available casualty and contamination data, an understanding of the affected population’s behaviour, risk pattern and coping mechanisms, and, wherever possible, anticipated population movements.”

As highlighted previously, implementing risk reduction projects will often be beyond the scope of mine action itself and require an integrated approach. FGDs, as presented in this article, allow operators to gain a better, context-specific understanding of affected community’s needs as it relates to risk reduction. The population understands better who we are, why we are there, and what we can offer. As operators, we can use the information gathered from the FGDs to improve our work by refining targeting, messaging, and identifying risk reduction alternatives. ©

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Noe Falk Nielsen holds a master’s degree in political science and has implemented risk education in Algeria, Iraq, Lebanon, and Somalia since 2006. Nielsen is presently the thematic focal point for EORE within NPA and also shoots news and mine action photos for international media and international organizations.