

RECOMMENDATIONS FOR ACTION

- Vietnam should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Vietnam should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- Vietnam should conduct high-quality survey in order to establish a baseline of CMR contamination.
- Vietnam should elaborate a national strategic plan and annual workplan for CMR with clear targets for survey and clearance.
- Vietnam should accelerate development of a national database and make data available to operators on a timely basis.
- Vietnam should publish comprehensive annual reports on the results of survey and clearance by all operators.

CLUSTER MUNITION REMNANT CONTAMINATION

Vietnam is massively contaminated by CMR but no accurate estimate exists, even to the nearest hundred square kilometres. An explosive remnants of war (ERW) impact survey, started in 2004 and completed in 2014, was only published in 2018. It claimed that 61,308km² or 19% of Vietnam's land surface area was affected by ERW but did not specify the area affected by CMR. It found, though, that CMR affected 32 of Vietnam's 63 provinces and cities.¹

In Quang Tri, reputedly Vietnam's most contaminated province, Norwegian People's Aid (NPA) is carrying out a province-wide survey, which it expects to complete in the first half of 2020.² Estimates of CMR-contaminated area are increasing sharply as survey progresses. In 2018, 165 confirmed hazardous areas (CHAs), amounting to 113km², were confirmed by technical survey, bringing the total to 255km². It is estimated that the remaining areas to be surveyed could result in additional CHAs of up to 100km².³

In Quang Binh, Mines Advisory Group (MAG) has used a desk-top non-technical survey methodology – Evidence Point Polygon (EPP) mapping – to map initial CHAs. MAG uses its historical operational data of explosive ordnance disposal (EOD) spot tasks to plot polygons of adjoining CMR evidence points. In 2018, MAG has mapped out almost 3.3km² across 118 CHAs. Based on extrapolations of available data, as at June 2019, MAG estimated that its historical data would lead to more than 42km² being defined as contaminated. However,

because MAG's data does not cover the whole province, overall contamination levels for Quang Binh will be higher than those being defined through EPP mapping. In 2019, MAG was planning to deploy a technical survey capacity to augment the EPP mapping data.⁴

Danish Demining Group (DDG) uses non-technical survey teams to estimate boundaries of a possible cluster munition strike area or battle area. In 2018, in Quang Nam province DDG found 151,967m² of additional CMR contamination. In Thua Thien Hue province it was just over 1.1km².⁵

The United States (US) dropped 413,130 tons of submunitions over Vietnam between 1965 and 1973, reportedly striking 55 provinces and cities. Vietnam's Military Engineering Command has recorded finding 15 types of US-made submunitions. Most submunition types were air-dropped, but artillery-delivered submunitions were also used in central Quang Binh and provinces to the south.⁶ Most of the CMR that international operators encounter in Quang Tri are BLU types 26, 29, and 61, and occasionally Mk 20 Rockeyes.⁷ In Quang Nam, almost all the CMR cleared by Danish Demining Group (DDG) were M83 submunitions.⁸ The Military Engineering Command has encountered substantial amounts of cluster munitions abandoned by the US military, notably at or around old US air bases, including eight underground bunkers found in 2009, one reportedly covering 4,000m² and containing some 25 tons of munitions.⁹

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Vietnam has huge unexploded ordnance (UXO) contamination and an unquantified mine problem (see Mine Action Review's *Clearing the Mines* report on Vietnam for further information). The ERW impact survey identified the most heavily contaminated regions as the central coastal provinces, the Central Highlands,

the Mekong River delta, and the Red River delta.¹⁰ The experience of international operators in central Vietnam points to wide variations in contamination types from district to district. International operators report encountering mainly projectiles, mortars, grenades, and some aircraft bombs.¹¹

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Vietnam's mine action programme is restructuring, but management and operations continue to depend largely on the armed forces. According to the Decree on the Management and Implementation of Mine Action Activities, issued in February 2019 (hereafter, the 2019 Decree), the Ministry of National Defence (MoD) will continue to elaborate and preside over the national mine action programme, as the lead authority, in coordination with other relevant ministries and sectors.¹² It also designates the MoD as the focal point for international cooperation in mine action. However, the roles and responsibilities of the MoD and other relevant ministries and bodies are described in relatively generic terms within the 2019 Decree and it is expected that Guiding Circulars, which were being drafted as at May 2019, will bring clarification.¹³

The Vietnam National Mine Action Centre (VNMAC) was established in 2014 by Prime Ministerial decision (No. 738 of 2013) to strengthen the direction of mine action and provide a focal point for mine action operations. The 2019 Decree instructed, "VNMAC, under the direction of the Prime Minister and managed by Ministry of Defense, to monitor, coordinate and implement mine action tasks."¹⁴ Although the VMAC is not yet fully functional, 2019 will be a crucial year as the national programme develops its legal framework, structure, policies and standards.¹⁵

Operators have been invited by VNMAC to provide inputs to the development and implementation of the 2019 Decree and recently to the draft of guiding Circulars. According to MAG, VNMAC are gradually engaging more with operators through site visits and invitations to briefings and meetings but improvements can still be made to coordination and information sharing.¹⁶ The challenge for VNMAC is to identify and implement the legal framework that would allow mine action stakeholders to support the decision-making process.¹⁷

The approval process for granting visas to international mine action staff, memorandums of understanding (MoUs), and the importation of demining equipment can take months, all of which has a detrimental impact on operators' project plans and budgets. However, it is hoped with the adoption of the 2019 Decree and forthcoming Guiding Circulars the enabling environment for mine action at a central level will improve.¹⁸

MAG, NPA, the United Nations Development Programme (UNDP), and Golden West all provide capacity development support in Vietnam. In 2018 and 2019, MAG provided training and familiarisation visits for operations staff from the Quang Tri mine action centre (QTMAC).¹⁹ In 2019, MAG will also work with Quang Binh province to develop a strategic plan and will advise on other structural improvements to mine action institutions, such as with the database unit and coordination mechanisms.

NPA is implementing two capacity-development projects with VNMAC. An NPA Senior Technical Advisor is working with the VNMAC senior management team on all issues related to their strategic, organisational, and individual development as well as with donor liaison and resource mobilisation. NPA is also providing an Information Management Technical Advisor to VNMAC which has supported the establishment, development, training, and mentoring of their Information Management Unit, which runs the national database.²⁰

VNMAC, the Korea International Cooperation Agency (KOICA), and UNDP are collaborating on a US\$30 million project (KV-MAP) for ERW survey and clearance, and to support information management resources, risk education, and victim assistance in two central provinces (Binh Dinh and Quang Binh) for three years (2018–20). A Joint Project Management Unit (JPMU), with representatives from each of the three organisations, will be responsible for project management, supported by a UNDP chief technical adviser who joined in March 2018. A Joint Project Coordination Committee (JPCC), comprising representatives from the MOD, VNMAC, UNDP, and KOICA, will provide overall strategic guidance and oversight.²¹

Golden West is providing IMAS-compliant EOD training to Provincial Military Commands in Ha Tinh, Quang Binh, and Quang Tri provinces to provide a sustained clearance response, as well as advising VNMAC on technologies and training and supporting US military-to-military EOD training. Golden West is also partnering with the Geneva International Centre for Humanitarian Demining (GICHD) in a Management of Residual Explosive Remnants of War project to study the ERW ageing; develop standards for the collection, cutting, and dissection of ERW; and to draw up and pilot a long-term risk management model.²²

GENDER

MAG has a gender policy, which is also incorporated into other policies and procedures. MAG encourages gender within its recruitment, training, and promotion procedures ensuring all staff are entitled to equal opportunities.²³

NPA follows Vietnamese law in regards to providing equal opportunity and non-discrimination in employment. NPA continues to work towards gender equality in the recruitment process and in the work place. Women are actively encouraged to apply for roles and to pursue development opportunities once employed.²⁴

DDG has a gender policy and implementation plan and promotes equal access to employment opportunities. Of the three operators, DDG has the highest proportion of women employed.²⁵

MAG's community liaison teams are gender balanced and trained to involve all groups, including women and children.²⁶ NPA's non-technical survey teams are gender balanced to engage with affected peoples regardless of gender or age. NPA has found this inclusive process effective for later technical survey within the Cluster Munition Remnant Survey (CMRS) process.²⁷ DDG uses community meetings, focus group discussions, and household interviews to ensure that consultation with local people during survey activities is inclusive. Survey teams are for the most part made up of both men and women.²⁸

MAG's, NPA's and DDG's operations data are disaggregated by sex and age.²⁹

In CMR survey and clearance, 24% of MAG's, 25% of NPA's, and 30% of DDG's staff are female. In managerial/supervisory positions 34% of MAG's, 33% of NPA's, and 40% of DDG's are staffed by women.³⁰

INFORMATION MANAGEMENT AND REPORTING

Data quality and accessibility continues to be a major challenge in Vietnam. VNMAC is responsible for national information management and uses the Information Management System for Mine Action (IMSMA). However, with the exception of KV-MAP project data, information is not shared with mine action operators.³¹ The ERW impact survey report released in 2018 noted that "regulations on reporting demining activities have not been strictly followed" and authorities had received clearance data for only two provinces, Ha Tinh and Quang Tri, where international donors have supported operations.³²

VNMAC information management unit intends to consolidate mine action data from the Technology Centre for Bomb and Mine Disposal (BOMICEN), the KV-MAP project and Quang Tri province into the national information management system. With support from NPA, VNMAC is equipped with the necessary technical capabilities and knowledge, but legislation governing the collection and sharing of mine action data was lacking.³³ However, it is thought that the forthcoming guiding Circular, which as at June 2019 was in the process of being drafted, will provide some clarity on the collection and sharing of mine action data, including data permitted to be shared by the military.³⁴

Vietnam has a National Mine Action Standard, a Technical Mine Action Regulation, and various mine action-related procedures, each of which have their own data collection forms. These data collection forms are not consistent, nor are they used in a standard manner. However, this issue is expected to be addressed by the legal framework being developed.³⁵

Mine action data collected by the provincial information management system in Quang Tri, also using IMSMA, is accessible to all mine action stakeholders. The database holds survey and clearance results, providing a basis for planning and tasking, as well as victim data. It has also received some data on clearance activity undertaken by the Provincial Military Command for the years 2000 to 2013.³⁶ The data, which are believed to be accurate, up to date, and reliable, have been the catalyst for greater coordination across all stakeholders within the province.³⁷ Live up-to-date operations data can be accessed via QTMAC's website, while the rest of the Vietnamese provinces with active mine action programmes do not have databases, and operators maintain their own.³⁸

Development of information management is an aim of the KV-MAP project, the goal of which is to improve available information for the UXO/mine action sector to support informed policy making and task prioritisation.³⁹ In 2018, Coordination Offices and Database Centers for Mine Action were established in Quang Binh and Binh Dinh provinces with training provided to provincial staff. As at June 2019, these centres manage the data from the KV-MAP project, which is then fed into the VNMAC database but the aim is for the centres to be sustainable and in the future manage the mine action data for the province.⁴⁰

PLANNING AND TASKING

Vietnam does not have a strategy specifically targeting CMR. Decision 504, approved by the Prime Minister in April 2010, set out a National Mine Action Plan for 2010 to 2025. The plan aimed to “mobilize domestic and international resources in making efforts to minimize and finally create impact-free environment for social economic development.” It called for ERW contamination clearance of 8,000km² between 2016 and 2025.⁴¹

A VNMAC action plan for 2018 included three main targets⁴²:

- Finalise legislation, decrees, and guidelines for the mine action sector in order to provide a unified framework for the sector country-wide
- Clarify contamination estimates through the release of the landmine impact survey and develop risk education
- Clearance of some 300km² of ERW affected land.

It is evident that at least partially these targets have been achieved: legislation has been introduced; clarifying guidelines are being developed; and the results of the ERW impact survey was released. As at May 2019, however, no information had been formally provided by VNMAC on the realisation of its 2018 goals or on its goals for 2019.

As at May 2019, there was no national prioritisation system for CMR clearance. In Quang Tri province, there is a prioritisation plan in place and an effective system for task allocation.⁴³ The prioritisation processes and accompanying forms were piloted in 2018 and were rolled out in May 2019, with QTMAC now managing the province-wide clearance task prioritisation process.⁴⁴ The criteria are established based on consultation and agreement between QTMAC and operators. In Quang Binh province, MAG has been applying its own procedures and process to prioritise clearance tasks based on scores of consent, hazard assessment, and community benefits.⁴⁵ DDG uses a consultative approach at the province, district, and village level to prioritise its clearance tasks.⁴⁶

In Quang Tri, MAG receives tasks dossiers from QTMAC in a timely manner. In Quang Binh, MAG produces its own task dossiers to the same standard as those in Quang Tri. These will be submitted once Quang Binh has a functioning mine action coordination body.⁴⁷

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

Vietnam has both National Technical Regulations (QCVNs), which are legally binding and similar in content to standing operating procedures (SOPs), and National Mine Action Standards (TCVN), closely aligned with the International Mine Action Standards (IMAS), but considered optional by VNMAC and the MoD. Both QCVNs and TCNVs were due to be updated in 2019 and following this, a system will be established for periodical reviews. According to NPA, the QCVNs are drafted with the MoD in mind and without consideration of other operators' SOPs, equipment use, land release methods, or structure and composition of teams. There are issues with the terminology used in TCNVs, chapters contradict themselves, and they read as a combination of SOPs and standards.⁴⁸

Operators are fully aware of the TCVN and the QCVNs and ensure their individual SOPs are in line with both IMAS and the QCVNs.⁴⁹

OPERATORS

Most clearance in Vietnam is conducted by the Army Engineering Corps and military-owned commercial companies. Outside the central provinces, its current strength and deployment are unknown. Since 2016, the Golden West Humanitarian Foundation, supported by US funding, has been training and mentoring the Provincial Military Commands (PMC) EOD teams in Quang Tri, Quang Binh and Ha Tinh. The Quang Tri PMC EOD team is now fully integrated into the tasking structure of the QTMAC as a valuable asset to the province. The Quang Binh PMC are coordinating closely with the KOICA project and offering support to them.

Officials have previously reported that it had 250 mine clearance and battle area clearance (BAC) teams nationally. The three PMC teams in these provinces all conducted BAC throughout 2018. Vietnam reportedly has more than 70 military-owned companies undertaking clearance related to infrastructure and commercial and development projects.⁵⁰

International operators active in 2018 included DDG, working in Quang Nam and Thua Tien Hue provinces; MAG, working in Quang Binh and Quang Tri provinces; NPA, working in Quang Tri and Thua Thien Hue provinces; and PeaceTrees Vietnam, who have been working in Quang Tri province since 1995.

MAG significantly increased its clearance capacity from 351 staff in 2017 to 610 in 2018. In 2019, MAG expected to deploy 670 personnel across both operational provinces. Community liaison capacity remained the same as 2017 in both Quang Tri and Quang Binh. In 2019, the community liaison capacity in Quang Binh was being slightly reduced as MAG will not generate EOD tasks from non-technical survey. Instead, they will respond only to emergency EOD spot tasks reported to its free hotline telephone number.⁵¹

NPA's non-technical survey capacity remained the same from 2017 to 2018. In 2019, NTS surveyors will be converted into technical survey searchers once non-technical survey is completed. Non-technical survey was expected to be completed in Quang Tri province by mid 2019 after which most of its staff will be converted into technical survey searchers. NPA expanded its technical survey capacity from 88 personnel in 2017 to 104 in 2018. In 2018, NPA deployed 44 clearance personnel, an increase from 2017. No change was expected in 2019.⁵²

DDG deployed ten people for non-technical survey in 2018, the same figure as 2017. In 2019, this will reduce to eight personnel due to funding constraints. DDG deployed 46 clearance personnel in 2018, an increase from 2017 due to the commencement of a project in A Luoi, Thua Thien Hue province, funded by the Embassy of Japan. Capacity reduced to 21 personnel in 2019 due to the end of funding for the project.⁵³

KV-MAP, which was initiated in February 2018, calls for ERW survey and clearance in the two provinces in 2018–20 to be carried out by 73 provincial military teams, (21 survey and 52 clearance teams), targeting survey of 200km² and clearance of about 80km².⁵⁴ The survey teams began working in September 2018 across the two provinces, and by the end of 2018 there were 15 teams working in Binh Dinh and 6 in Quang Binh. Clearance began in 2019 and, as at June, 12 clearance teams were deployed. An additional two survey teams have also been deployed to Quang Binh.⁵⁵

In 2018, a Quality Management System (QMS) consisting of eleven procedures was developed by VNMAC and the GICHD. These QMS procedures are being piloted in KV-MAP but, in general, no effective external quality management is being implemented by the national authority. In 2019, there was a plan to establish and train a VNMAC Quality Management team. This team will be trained by NPA, with DFID funding, with a view to receiving accreditation in early 2020 from VNMAC, with NPA and GICHD support.⁵⁶ The 2019 Decree tasks the MoD with guiding the implementation of quality management. This is not in practice yet and it is expected that the forthcoming Circular will provide guidance.⁵⁷

OPERATIONAL TOOLS

MAG, NPA, and DDG all deploy manual clearance teams. MAG also deploys mechanical assets to support vegetation removal. In 2019, MAG was seeking the necessary approvals from provincial and national authorities to deploy drones.⁵⁸

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

LAND RELEASE OUTPUT IN 2018

In 2018, 113km² was confirmed as containing CMR by technical survey, 74km² was surveyed, and 5,548 submunitions were found and destroyed in the process. In addition, MAG confirmed almost 3.3km² and DDG over 1.2km² as containing CMR using non-technical survey.

A total of over 26km² of CMR-contaminated area was cleared with 5,805 submunitions found and destroyed. There were also 1,167 submunitions found and destroyed during spot tasks.

SURVEY IN 2018

In Quang Tri, ranked as Vietnam’s most heavily contaminated province, NPA continued to work in a partnership with MAG, under which NPA conducted CMRS and MAG cleared the resulting CHAs.

introduction, in January 2018, of skipping two boxes in each direction of a box with a confirmed evidence point.⁵⁹ NPA aims to complete survey of Quang Tri in 2020 and will then deploy survey teams for clearance.⁶⁰

As part of the process of refining CMRS, NPA adopted a more systematic technical survey approach that included 50 metre fade-out and “skip boxes” methodology which have significantly accelerated the process of defining CHA boundaries. A fade-out of 50 metres whenever evidence of CMR was found was introduced in April 2016 which was augmented by the

NPA almost doubled the amount of area confirmed as containing CMR from 53.7km² in 2017 to 113.4km² in 2018. This increase was due to improved survey methodology: by introducing box skipping and by focusing on defining the CHA boundary NPA has found that the same effort leads to greatly increased output.⁶¹

CLEARANCE IN 2018

Operators cleared over 26km² in 2018, an increase of more than 54% on the 16.8km² cleared in 2017. The majority of this increase in output came from MAG, which cleared 61% more land than it did in 2017. In 2018, a total of 6,972 submunitions were destroyed of which 5,805 were found and destroyed during clearance and 1,167 during EOD spot tasks.

Table 1: Technical survey of CMR-contaminated area in 2018

Operator	Area surveyed (m ²)	CHAs identified	Area confirmed (m ²)	CMR destroyed	Other UXO destroyed
NPA	74,290,000	165	113,440,893	5,548	1,874
Totals	74,290,000	165	113,440,893	5,548	1,874

Table 2: Clearance of CMR-contaminated area in 2018

Operator	Province	Areas cleared	Area cleared (m ²)	Submunitions destroyed	Other UXO destroyed
MAG	Quang Binh	22	4,547,998	2,184	331
MAG	Quang Tri	40	20,264,150	2,957	3,163
NPA	Quang Tri	N/R	397,095	86	126
PMC/GW	Quang Tri	8	458,959	2	202
NPA	Thua Thien Hue	N/R	281,970	256	99
DDG	Quang Nam	43	129,502	3	148
DDG	Thua Thien Hue	4	171,000	317	139
Totals		117	26,250,674	5,805	4,208

N/R = Not reported

In Quang Tri, MAG conducts clearance in partnership with NPA, which defines CHAs through technical survey. In Quang Binh, MAG clears CHAs defined through EPP Mapping. In 2018, a submunition or other remnant was found in every 2,082m² in Quang Binh and in every 6,852m² in Quang Tri. There was one CHA of 6,163m² in Quang Binh in which the teams found no CMR during clearance. However, this site was an anomaly as it was the first CHA defined through EPP mapping that subsequently had no contamination.⁶²

NPA's clearance output remained relatively consistent in 2018. A suspension in clearance operations in Thua Thien Hue was compensated for by the introduction of two new clearance teams in the last quarter of the year. No areas were cleared where contamination was not found.⁶³

DDG deploys battle area clearance teams to areas with suspected contamination as estimated by non-technical survey teams. Clearance of the area begins from evidence points collected by the non-technical survey teams and clearance to fade-out is applied to determine the boundaries of clearance.⁶⁴

In 2018, Quang Tri PMC were in the process of being organised into a functional EOD team so tasks were minimal, but outputs are expected to increase in 2019. The Quang Binh PMC did no clearance and responded to minimal spot tasks in 2018. This was being addressed in 2019.⁶⁵

Table 3: EOD spot tasks in 2018⁶⁶

Operator	No. of spot tasks	CMR destroyed	Other UXO destroyed
MAG	3,636	722	6,727
NPA	1,145	270	3,165
DDG	808	175	867
Totals	5,589	1,167	10,759

Vietnam has not set a target date for the completion of CMR clearance. In its national mine action plan for 2010 to 2025 it called for the clearance of 8,000km² of CMR from 2016 to 2025⁶⁷ but did not specify how much of this should be CMR. The lack of a baseline of CMR contamination and a lack of information at a national level about ongoing survey and clearance across the country makes it difficult to understand both Vietnam's annual progress in reducing CMR contamination and how this contributes to the completion of CMR clearance.

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- 1 Vietnam National Mine Action Centre (VNMAC), "Report on Explosive Remnants of War Contamination in Vietnam Based on the "Vietnam Explosive Remnants of War Contamination Survey and Mapping – Phase 1 Project", Hanoi, 2018, p. 38.
- 2 Email from Resad Junuzagic, Country Director, NPA, 6 May 2019.
- 3 Email from Simon Rea, Country Director, MAG, 24 April 2019.
- 4 Ibid; and email of 28 June 2019.
- 5 Email from Clinton Smith, Country Director, DDG, 29 May 2019.
- 6 "Vietnam mine/ERW (including cluster munitions) contamination, impacts and clearance requirements", Presentation by Sr. Col. Phan Duc Tuan, People's Army of Vietnam, in Geneva, 30 June 2011; Handicap International, *Fatal Footprint, the Global Human Impact of Cluster Munitions*, Brussels, November 2006, p. 15.
- 7 Interview with Magnus Johansson, NPA, Hanoi, 17 April 2018, and Michael Raine, MAG, Quang Tri, 18 April 2018.
- 8 Email from Clinton Smith, Country Director –Vietnam, DDG, 23 March 2017.
- 9 Interview with Sr. Col. Phan Duc Tuan, People's Army of Vietnam (PAVN), in Geneva, 30 June 2011.
- 10 VNMAC, "Report on Explosive Remnants of War Contamination in Vietnam", Hanoi, 2018, pp. 33–36.
- 11 Interviews with Resad Junuzagic, NPA, Jan Eric Stoa, NPA, and Magnus Johansson, NPA, Hanoi, 17 April 2018, and with Simon Rea, MAG, and Michael Raine, MAG, Quang Tri, 19 April 2018; and emails from Clinton Smith, Country Director –Vietnam, DDG, 23 March 2017 and 19 April 2018.
- 12 Decree on Implementation and Management of Mine Action, No.18/2019, 1 February 2019.
- 13 Email from Simon Rea, MAG, 24 April 2019.
- 14 Draft Decree on the "management and implementation of mine action activities", Hanoi, April 2018.
- 15 Emails from Simon Rea, MAG, 24 April 2019; and Resad Junuzagic, NPA, 6 May 2019.
- 16 Email from Simon Rea, MAG, 24 April 2019.
- 17 Email from Resad Junuzagic, NPA, 6 May 2019.
- 18 Emails from Resad Junuzagic, NPA, 6 May 2019; and Clinton Smith, DDG, 29 May 2019.
- 19 Email from Simon Rea, MAG, 24 April 2019.
- 20 Email from Resad Junuzagic, NPA, 6 May 2019.
- 21 Interview with Nguyen Hang Phuc, Deputy Director General, VNMAC, Hanoi, 18 April 2018; telephone interview with Nils Christiansen, Chief Technical Adviser, UNDP, 23 April 2018; and emails, 3 May and 11 June 2018.
- 22 Emails from Lee Moroney, Vietnam Country Director, Golden West Humanitarian Foundation, 22 April 2018 and 22 June 2019; and Rob White, Adviser, Strategic Management and Residual Contamination, GICHD, 25 April 2018.
- 23 Email from Simon Rea, MAG, 24 April 2019.
- 24 Email from Resad Junuzagic, NPA, 6 May 2019.
- 25 Email from Clinton Smith, DDG, 29 May 2019.
- 26 Email from Simon Rea, MAG, 24 April 2019.
- 27 Email from Resad Junuzagic, NPA, 6 May 2019.
- 28 Email from Clinton Smith, DDG, 29 May 2019.
- 29 Emails from Simon Rea, MAG, 24 April 2019; Resad Junuzagic, NPA, 6 May 2019; and Clinton Smith, DDG, 29 May 2019.
- 30 Ibid.
- 31 Email from Resad Junuzagic, NPA, 6 May 2019.
- 32 VNMAC, "Report on Explosive Remnants of War Contamination in Vietnam", Hanoi, 2018, pp. 36–37.
- 33 Email from Resad Junuzagic, NPA, 6 May 2019.
- 34 Skype interview with Nils Christiansen, UNDP, 13 June 2019.
- 35 Ibid.
- 36 Meeting with Christopher Ramsden, Senior Technical Adviser, LWCC, Nguyen Duc Thien, Manager, LWCC; Nguyen Van Duc, Data Processing Officer, LWCC; and Snr Lt. Tran Van Hai, Operations Officer, Provincial Military Command, in Dong Ha, Quang Tri, 19 April 2018.
- 37 Email from Resad Junuzagic, NPA, 6 May 2019.
- 38 Emails from Resad Junuzagic, Country Director, NPA, 7 April 2017; Simon Rea, Country Director, MAG, 11 April 2017 and 28 June 2019; and Clinton Smith, DDG, 23 March 2017.
- 39 UNDP, "Vietnam mine action project: Project brief", January 2019.
- 40 Skype interview with Nils Christiansen, UNDP, 13 June 2019.
- 41 Prime Minister, "Decision on Approval of the National Mine Action Plan Period 2010–2025", Hanoi, 21 April 2010.
- 42 Interview with Nguyen Hang Phuc, VNMAC, Hanoi, 18 April 2018.
- 43 Email from Resad Junuzagic, NPA, 6 May 2019.
- 44 Email from Simon Rea, MAG, 16 June 2019.
- 45 Email from Simon Rea, MAG, 24 April 2019.
- 46 Email from Clinton Smith, DDG, 29 May 2019.
- 47 Email from Simon Rea, MAG, 24 April 2019.
- 48 Email from Resad Junuzagic, NPA, 6 May 2019.
- 49 Ibid.
- 50 Interview with Sr. Col. Nguyen Thanh Ban, Engineering Command, Hanoi, 18 June 2013; email from Executive Office of the National Steering Committee, 6 August 2012; and interviews with mine action stakeholders, Hanoi, 16–20 April 2018; and email from Lee Moroney, Golden West Humanitarian Foundation, 22 June 2019.
- 51 Emails from Simon Rea, MAG, 24 April and 28 June 2019.
- 52 Email from Resad Junuzagic, NPA, 6 May 2019.
- 53 Email from Clinton Smith, DDG, 29 May 2019.
- 54 Interview with Nguyen Hang Phuc, Deputy Director General, VNMAC, Hanoi, 18 April 2018; telephone interview with Nils Christiansen, Chief Technical Adviser, UNDP, 23 April 2018; and emails, 3 May and 11 June 2018.
- 55 Skype interview with Nils Christiansen, UNDP, 13 June 2019; and email, 17 June 2019.
- 56 Email from Resad Junuzagic, NPA, 6 May 2019.
- 57 Email from Simon Rea, MAG, 24 April 2019.
- 58 Emails from Simon Rea, MAG, 24 April 2019; Resad Junuzagic, NPA, 6 May 2019; and Clinton Smith, DDG, 29 May 2019.
- 59 GICHD, "Field Study: Cluster Munition Remnant Survey (CMRS) approach applied in Quang Tri province, Vietnam", December 2018.
- 60 Emails from Resad Junuzagic, NPA, 6 May 2019; and Simon Rea, MAG, 28 June 2019.
- 61 Ibid.
- 62 Emails from Simon Rea, MAG, 24 April and 28 June 2019.
- 63 Email from Resad Junuzagic, NPA, 6 May 2019.
- 64 Email from Clinton Smith, DDG, 29 May 2019.
- 65 Email from Lee Moroney, Golden West Humanitarian Foundation, 22 June 2019.
- 66 Emails from Resad Junuzagic, NPA, 6 May 2019; Clinton Smith, DDG, 29 May 2019; and Simon Rea, MAG, 16 June 2019.
- 67 Prime Minister, "Decision on Approval of the National Mine Action Plan Period 2010–2025", Hanoi, 21 April 2010.