



# RESEARCH REPORT

## Community Perspectives of Humanitarian Mine (Explosive Ordnance) Action in Vietnam



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## LIST OF ABBREVIATIONS

ARMAC	ASEAN Regional Mine Action Center
CRS	Catholic Relief Services
DBCU	Database and Coordination Unit
ERW	Explosive Remnants of War
FGD	Focus Group Discussion
HMA	Humanitarian Mine Action
KII	Key Informant Interview
KVPV	Korea–Vietnam Peace Village
MAG	Mines Advisory Group
MOLISA	Ministry of Labour, Invalids and Social Affairs
MRE	Mine Risk Education
NGO	Non-governmental organization
NPA	Norwegian People's Aid
PPC	Provincial People Committee
PTVN	PeaceTrees Vietnam
QTMAC	Quang Tri Mine Action Center
RCS	District Red Cross Society
UNDP	United Nations Development Programme
UXO	Unexploded Ordnance
VNAH	Vietnam Assistance for the Handicapped
VNNMAC	Vietnam National Mine Action Center

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## EXECUTIVE SUMMARY

Vietnam is significantly affected by unexploded ordnance (UXO) from past wars. Despite implementing a range of programs on humanitarian mine action (HMA) since the 1990s, there is limited documentation on the extent of community participation and the views of affected people on these programs. In May 2024, a cross-sectional study was conducted with 400 households (quantitative) and 23 interviews and seven focus group discussions (qualitative) with officials and residents in Quang Binh and Quang Tri provinces.

The average age of participants in the survey was 46, the majority male, with at least a secondary school education, working in agriculture, and earning a household income of less or equal to five million VND per month (approximately USD198). This demographic reflects the survey's focus on household heads in economically challenged villages and communes affected by UXO.

Regarding community participation in UXO clearance, many households were unaware of UXO presence on their land, with only about 15% believing their land was contaminated, and fewer (6%) believing community land was contaminated. Of the respondents who believed their land was contaminated, 60% had contacted clearance organizations, and all households that requested clearance had their land cleared or UXOs destroyed. Respondents reported that UXO-related accidents have significantly decreased in recent years, and all households reported that they used their land post-clearance. Community involvement in UXO clearance was evident, with 70% of households participating to some extent. Commune and village officials mobilized residents and coordinated with clearance organizations, while households marked UXO locations, warned others, and provided other support, such as providing accommodation for clearance teams. However, only 35% of households reported participating in village meetings about community land clearance, indicating a gap in local government initiatives.

Most households (87%) received UXO risk education messages in the past five years, with higher rates in Quang Tri, which is more affected by UXO and has had more mine action operators working there. In communities, risk education was mainly received through radio and TV broadcasts (87%) and village meetings (58%). Most survey respondents (63%) felt that village meetings were the most effective means of disseminating risk education messages. The risk education programs involve organizations such as the Red Cross Society, the Women's Union, Youth Union, and Veterans' Associations. 92% of respondents reported that their children received risk education at primary and secondary school. In schools, 92% of students received UXO risk education as part of life-skills lessons into which risk education has been incorporated and taught by trained teachers. Students also engaged in art programs and painting competitions around the theme of risk education. These activities helped to improve public knowledge about UXO dangers and recognition of UXO and mines.

For adults, the frequency of risk education sessions was limited, with most households receiving messages only once in five years. The common form of communication remained one-way information provision (through broadcasts or village meetings) and lack diversity and participation, which may reduce effectiveness. Volunteer risk education activities were also found to have declined, particularly in Quang Binh province.

Survey respondents reported that if accidents occurred, they typically happened in villages or at the edge of the forest as a result of digging and farming. Most victims reported receiving some support from local authorities (80%) and organizations (20%) focusing on livelihood development. However, this support only partially met their needs, and victims sought more assistance for livestock development, lower loan interest rates, increased monthly support, and the establishment of a disabled club for communication and knowledge exchange. Communities provided some limited support to victims, sometimes donating money or other small essential items.

The survey findings suggest that community participation could be enhanced in terms of increasing understanding of clearance and survey processes and encouraging greater participation in meetings discussing land to be cleared. Risk education can be improved through more interactive communication methods. Community support for UXO victims could be enhanced through digital platforms (social media, websites, etc.). Organizations and governments could also prioritize victims and their families for livelihood improvement programs, such as production development loans.



# CHAPTER 1: INTRODUCTION

## 1.1. BACKGROUND AND RATIONALE

Vietnam is severely affected by landmines and UXO remaining from the war. From 2010 to 2018 the "Vietnam National Explosive Remnants of War (ERW) Contamination Survey and Mapping" project was conducted, finding that all 58 provinces and five municipalities across the country had some level of contamination by ERW, with 82% (9,116 out of 11,134) of communes affected. According to the Vietnam National Mine Action Center (VNMAC), the total area of contamination is 6.1 million hectares, accounting for 18.71% of the country's total land.<sup>1</sup> More than 100,000 people are reported to have been killed or injured by ERW since the end of the war.<sup>2</sup>

The Ministry of National Defense was responsible for mine action at the national level from 2006 until 2014, when VNMAC was established to provide a focal point for mine action operations. In 2019, a decree on mine action, and an accompanying guiding circular, officially made VNMAC responsible for managing all mine action activities in Vietnam.<sup>3</sup>

Provincial authorities have a high level of autonomy in managing mine action activities at the local level. In Quang Tri province, the Quang Tri Department of Foreign Affairs was the focal point for mine action coordination in the province from 1996. The province had the first mine action center established at provincial level in 2018, the Quang Tri Mine Action Center (QTMAC).<sup>4</sup> In 2020, the authorities in Quang Binh also began to develop a provincial coordination structure.<sup>5</sup>

There is no nationwide mechanism to collect mine/ERW casualty data in Vietnam. Risk education activities in Vietnam are informed by locally available information, population and census data, and data collected by the Ministry of Labour, Invalids and Social Affairs (MOLISA).<sup>6</sup> Some studies have also been conducted on risk exposure and education needs, which inform the targeting of risk education. The main target groups are children, farmers, scrap metal collectors and dealers.

1. <http://baochinhphu.vn/Hoat-dong-Bo-nganh/Ca-nuoc-con-800-nghin-tan-bom-min-chua-no-sau-chien-tranh/333176.vgp> (2018). The total land area of Vietnam is 33.1 million hectares.
2. Project Document prepared by VNMAC, Ministry of National Defense (2016).
3. Decree No. 18/2019/ND-CPLaos Open SDG Data Platform, "SDG 18: Lives Safe from Unexploded Ordnance (UXO)," no date.
4. QTMAC, "Project Establishment,"
5. <https://quangbinhdbcu.vn/news>
6. MAG Vietnam, 2020

## 1.2. RESEARCH OBJECTIVES

A research gap still exists when considering the involvement of affected communities in humanitarian mine action and the impacts on the local livelihoods, particularly from the local people's perspectives. This study aims to evaluate the local perspective on the implementation of HMA including UXO/mine risk education, survey and clearance, and victim assistance. Specific objectives are to:

1. Explore local community participation in humanitarian mine action in their communities including mine risk education, survey, clearance, and victim assistance;
2. Examine the perspective of the local communities on the implementation of humanitarian mine action and its impacts on their livelihoods; and
3. Identify the barriers that prevent the local communities from effective participation in the humanitarian mine action activities in their communities.

Based on the survey results, ASEAN Regional Mine Action Center (ARMAC) will provide recommendations regarding humanitarian mine action in the communities included within the study areas, covering mine risk education, survey, clearance, and victim assistance.

## 1.3. RESEARCH QUESTIONS

The study addresses the following research questions:

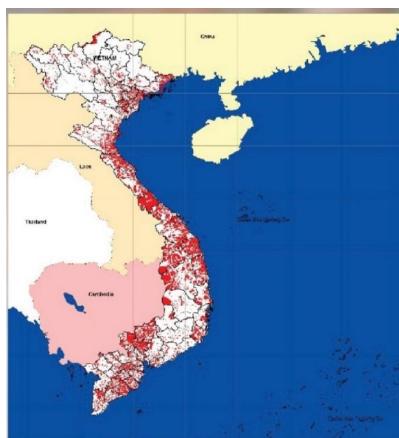
- Q1. To what extent local communities have been involved in planning and implementation of humanitarian mine action in their communities?
- Q2. How have UXO clearance organization and local government facilitated the local communities to participate in the humanitarian mine action activities?
- Q3. What are the local perceptions and experiences from participation in the implementation of humanitarian mine action in their communities?
- Q4. To what extent has humanitarian mine action contributed to improve the livelihoods of the local people?
- Q5. To what extent can humanitarian mine action meet the needs of the local communities including women, ethnic minorities, people with disability, and other disadvantaged groups?

# CHAPTER 2: LITERATURE REVIEW

## 2.1. VIETNAM IN BRIEF

Situated in Southeast Asia, Vietnam is bordered by China to the North, Laos and Cambodia to the West, and Eastern Sea of Pacific Ocean to the East. The country has diverse topography comprising hills, mountains, deltas, and coastline. The climate is monsoonal and humid and Vietnam can be exposed to strong weather patterns from the coast.<sup>7</sup> With a population of 100 million people (as of 1 June 2023), Vietnam ranks 15th among the most populous countries in the world, and roughly 39% live in urban areas. People aged 15 to 64 account for 65% of the country's population.<sup>8</sup> Vietnam is a multi-ethnic country with 54 ethnic groups, among which the Kinh people account for 86% of the population. The majority of the other 53 ethnic groups are found in the mountainous areas and the central regions, particularly in the Northern and Northern Central region.<sup>9</sup>

## 2.2 THE LEGACY OF WAR



Vietnam bears the enduring impact of historical conflicts, with the remnants of an estimated 350–800 thousand tons of mines, bombs and UXO, scattered across the country.<sup>10</sup> Presently, an estimated 800,000 tons of unexploded ordnance and ammunition remain in various regions of Vietnam, encompassing nearly 6.1 million hectares, constituting 18.71% of the total national area.<sup>11</sup> All 63 provinces and municipalities in Vietnam have been identified as having varying levels of contamination by UXO and other ERW.<sup>12</sup>

A survey conducted between 2010 and 2018 found that 9,116 communes and wards (out of 11,134) had some level of contamination, with certain localities reporting contamination levels exceeding 80%.<sup>13</sup>

The aftermath of war, spanning from 1975 to the present, has resulted in at least 40,000 fatalities

and 60,000 injuries caused by explosive remnants of mines and munitions.<sup>14</sup> In the central provinces alone, more than 22,800 people have been affected, with over 10,540 reported fatalities and 12,260 injuries. From 2013 to 2018, there have been 1,813 reported accidents, resulting in nearly 1,000 fatalities.<sup>15</sup>

## 2.3 HUMANITARIAN MINE ACTION IN VIETNAM

The National Action Program to address mine/UXO contamination (referred to as Program 504) was approved by the Prime Minister on 21st April 2010. The State Steering Committee for Program 504, including the Ministry of National Defence (MOND) and the MOLISA, was established to manage the implementation of humanitarian mine action in Vietnam. The Vietnam Mine Action Centre (VNMAC), which sits within the MOND, was established on 4 March 2014 under Decision No. 319/QĐ-TTg of the Prime Minister to coordinate and implement HMA in Vietnam.<sup>16</sup>

VNMAC is responsible to promote awareness of UXO contamination in communities; to mobilize domestic and foreign resources to support mine action; to provide technical assistance to the government in developing the appropriate policies and technical regulations regarding mine action; and to coordinate and manage all national and international cooperation activities related to mine action.<sup>17</sup>

The two provinces where the research was conducted, Quang Binh and Quang Tri, both have mine action programs. The mine action program in Quang Tri began in 1996, and several organizations have worked in the province, including Project Renew, Norwegian People's Aid (NPA), Mines Advisory Group

7. <https://chinhphu.vn> Project Document prepared by VNMAC, Ministry of National Defense (2016).

8. <https://danso.org/viet-nam>

9. <https://chinhphu.vn>

10. Vietnam mine/ERW (including cluster munitions) contamination, impacts and clearance requirements," presentation by Sr. Col. Phan Duc Tuan, Deputy Commander, Military Engineering Command, People's Army of Vietnam (PAVN), in Geneva, 30 June 2011; and Handicap International (HI), Fatal Footprint, the Global Human Impact of Cluster Munitions (Brussels: HI, November 2006), p. 15.

11. VNMAC, "Data on Mine pollution across the country," 5 January 2020.

12. VNMAC, "Data on Mine pollution across the country," 5 January 2020.

13. VNMAC (2016), Vietnam National Explosive Remnants of War Contamination Surveying and Mapping from 2010-2014. Accessed at [https://ussh.vnu.edu.vn/uploads/ussh/news/2022\\_09/bctn-all-small.pdf](https://ussh.vnu.edu.vn/uploads/ussh/news/2022_09/bctn-all-small.pdf)

14. VNMAC, "Data on Mine pollution across the country," 5 January 2020.

15. VNMAC, "Data on Mine pollution across the country," 5 January 2020.

(MAG), Danish Refugee Council (DRC, previously Danish Demining Group), Solidarity International (SODI), PeaceTrees Vietnam (PTVN), Clear Path International (CPI) and Catholic Relief Services (CRS). The mine action program in Quang Binh province began much later, in 2003, with activities initially set up by MAG. Subsequently other organizations, including NPA and PTVN, started-up activities there.

A provincial coordination centre, the Quang Tri Mine Action Centre (QTMAC)<sup>18</sup> was established in Quang Tri in 2018 with the objectives to coordinate mine action in the province and to support stakeholders in the implementation of the Provincial Mine Action Program, overseen by the Provincial Mine Action Steering Committee (PMASC).

Progress is ongoing in setting up a coordination centre in Quang Binh. The Project on the Establishment and Support of a Provincial Mine Action Database and Coordination Unit (DBCU) in Quang Binh province is a part of the mine action program cooperation between Quang Binh Provincial People Committee (PPC) and Norwegian People's Aid (NPA) in the period 2020 – 2025. The DBCU in Quang Binh is intended to provide an information management and coordination system for mine action at provincial level, supporting provincial and national authorities to make more informed decisions regarding mine action planning.<sup>19</sup>

## 2.4. SURVEY AND CLEARANCE OF MINES AND UXO

Clearance of mines and UXO in Southeast Asia began during the Second Indochina War for military and strategic purposes.

The National Mine Action Program of the Government of Vietnam 2010–2025, Program 504, sets out targets for the clearance of mines and UXO. The Program 504 preliminary report covering the period 2010 to 2020 stated that some 485,000 hectares of contaminated land had been surveyed and cleared. By 2023, it was reported that 500,000 hectares had been released, including 74,000 hectares under the government 504 program, 300,000 hectares for socio-economic development projects, and 111,240 hectares under humanitarian mine clearance projects.<sup>20</sup> However, this is below the Program 504 target to clear 800,000 hectares of contaminated land between 2016–2025.

From 2000–2020 in Quang Tri province, 85.5% of items cleared were ERW, including aircraft bombs, rockets, fuses, guided missiles, mortars, grenades, and projectiles. 3,751 landmines were cleared, representing 1% of total items cleared.<sup>21</sup>

Vietnam has introduced several national standards and policies to guide and regulate the sector.

These include: i) National standard TCVN 10299 issued in 2014, focusing on Overcoming the consequences of post-war bombs, mines, and explosive ordnance<sup>22</sup>, ii) Circular No. 02/2017/TT-BQP issued in 2017 by the Minister of National Defense, which regulates training activities, occupational hygiene, and safety<sup>23</sup>, iii) Vietnamese standards 01:2022/BQP have replaced Vietnamese standards 01:2012/BQP, focusing on investigation, survey, clearance, destruction, acceptance, and handover of mines and explosives<sup>24</sup>, and iv) Decree 18/2019/ND-CP, established in 2019, manages and executes activities to overcome the consequences of post-war bombs, mines, and explosive ordnance. This decree contains explicit provisions regarding educational activities aimed at preventing accidents related to post-war ordnance and explosive ordnance.<sup>25</sup>

## 2.5. UXO/MINE RISK EDUCATION

VNMAC and the Ministry of Education and Training are the government focal points for mine/ERW risk education. The activity is mainly conducted in rural areas and with a focus on cluster munition remnants and ERW, although landmines are also covered in most presentations.

Risk education has been taught in primary schools for many years, but lessons are not standardized and often are only included as part of existing lessons or extracurricular activities.<sup>26</sup>

16. Circular 03/2016/TT-BQP
17. Government Electronic Newspaper, "Functions and tasks of the National Mine Action Center," 1 March 2016; and VNMAC, "Vietnam National Mine Action Centre," 2 January 2020.
18. <https://qtmac.vn/public/en/introduce>
19. Quang Binh DBCU, "The database and coordination unit for mine remediation of Quang Binh province comes into operation," 12 April 2021; and Quang Binh DBCU, "Introduction to Quang Binh DBCU," no date.
20. MOND and VNMAC (2024): Data from Steering Committee of Program 504
21. QTMAC, "Facts and Figures: Clearance," updated December 2020
22. Tiêu chuẩn quốc gia TCVN 10299-2014 "National Standard TCVN 10299-2014", accessed at <https://thuvienphapluat.vn/TCVN/Linh-vuc-khac/TCVN-10299-5-2014-Khac-phuc-hauqua-bom-min-vat-no-sau-chien-tranh-Phan-5-913417.aspx>
23. Thông tư số 02/2017/TT-BQP về hoạt động huấn luyện an toàn, vệ sinh lao động "Circular No. 02/2017/TT-BQP on occupational safety and hygiene training activities.
24. Quy chuẩn QCVN 01:2022/BQP "Standards QCVN 01:2022/BQP, accessed at <https://mod.gov.vn/vn/van-ban/sa-qlcddh-vbpl-htvb/sa-qlcddh-vbpl-qlnn/4c83a393-5dd1-4755-837c-31e7c2d5afc8>
25. Nghị định 18/2019/NĐ-CP về quản lý và thực hiện hoạt động khắc phục hậu quả bom mìn vật nổ sau chiến tranh - "Decree 18/2019/NĐ-CP on management and clearance of unexploded ordnance", accessed at <https://thuvienphapluat.vn/van-ban/Linh-vuc-khac/Nghi-dinh-18-2019-ND-CP-quan-ly-hoat-dong-khac-phuc-hauqua-bom-min-vat-no-sau-chien-tranh-406491.aspx>
26. Ta Thi Hai Yen, "Game-based Learning: An Innovative and Scalable Approach to Mine Risk Education," in ARMAC Magazine, "Exploring Mine/ERW Risk Education in ASEAN," February 2020, pp. 28–29.

Risk education is delivered in primary and secondary schools in four provinces (covering 1,160 schools in total) by Catholic Relief Services (CRS).<sup>27</sup> Mines Advisory Group (MAG) also conducts risk education sessions in schools in Quang Tri and Quang Binh provinces, and conducts sessions in combination with non-technical survey at village and household level.<sup>28</sup> Farmers are targeted through village and union meetings.

Project Renew, in partnership with the Youth Union and Red Cross, runs a Community Reporting Network to ensure that any items of explosive ordnance found are reported.<sup>29</sup> Over 200 people are members of the network, including Youth Union officers, schoolteachers, and Red Cross workers.<sup>30</sup>

PTVN runs the Danaan Parry Landmine Education Center in Quang Tri province, which provides risk education for children and serves as a training center for Vietnamese volunteers, who then return to their own communities to deliver risk education messages.<sup>31</sup> The Golden West Humanitarian Foundation highlights the dangers of scrap metal collection for children through an illustrated book called "Vinh and Trinh's Adventure."<sup>32</sup> The Korea-Vietnam Peace Village Project implemented by UNDP has also provided risk education to people in Quang Binh and Binh Dinh provinces.<sup>33</sup>

A survey undertaken by UNDP in Quang Tri and Quang Binh in 2021 found some positive impacts from risk education activities, with an increased knowledge and understanding among local people about the risk of UXO and landmines. It also found that traditional media channels such as radio and TV were becoming less popular as a method of receiving messages, and face-to-face and interactive communication channels had increased in popularity.<sup>34</sup> A 2019, a study by the ASEAN Regional Mine Action Centre (ARMAC) found that there needed to be more consistency in the risk education materials, messages, and methodologies used in Vietnam.<sup>35</sup>

## 2.6. VICTIM ASSISTANCE

Many persons with disabilities in Vietnam, especially low-income families, face extreme difficulty in carrying out daily activities due to the lack of appropriate care and support.

Where mine/ERW victims have registered with the state and have registration cards, they are entitled to assistance from the state including orthopedic surgery and physical rehabilitation.<sup>36</sup> Vietnam Assistance for the Handicapped (VNAH) partners with regional rehabilitation centers run by MoLISA to provide rehabilitation services and prosthetic devices.<sup>37</sup>

VNMAC reported that there were 73 centres for persons with disabilities and 45 special social work centres which provide rehabilitation and occupational services, including for victims of mines/ERW. A network of "community collaborators" in Vietnam assists people with disabilities and mine/ERW victims in their own communities, operating in several provinces and cities.<sup>38</sup>

Project Renew restarted an Orthopedic Workshop in Quang Tri General Hospital in 2018-19 with Irish funding to bring rehabilitation services closer to survivors. The workshop provides prostheses and assistive devices for physical rehabilitation and social reintegration for persons with disabilities, including mine/ERW victims.<sup>39</sup> Project Renew has also supported families of mine/ERW victims and disabled people by providing cows and vocational training through provincial Blind Societies in Dakrong, Vinh Linh and Quang Tri.<sup>40</sup> UNDP, through the Korea Vietnam Peace Village project, has provided health screening and prosthetics and rehabilitation services in Quang Binh and Binh Dinh, in addition to supporting victims and their communities in agricultural activities through skills, knowledge and access to credit and markets.<sup>41</sup> Catholic Relief Services supports a Volunteer Network that connects landmine survivors to NGOs and social organizations for support, and links survivor families with the Department of Agriculture in Quang Binh and Quang Tri to provide livelihood training.<sup>42</sup>

27. Hal Judge, "Integrated Approaches to Explosive Ordnance Risk Education in ASEAN Member States," ARMAC, April 2020, p. 18.

28. <https://www.maginternational.org/>

29. <https://landmines.org.vn/>

30. ICBL-CMC, Country Profile: Vietnam, 11 February 2021.

31. PTVN, "What we do: Humanitarian Mine Action, Mine Risk Education," undated; and <https://www.peacetreesvietnam.org/what-we-do/mine/danaan-parry-landmine-education-center.html>

32. <https://goldenwesthf.org/>

33. UNDP (2021), Korea-Vietnam Peace Village Project Brief <https://www.undp.org/sites/g/files/zskgk326/files/2022-08/KVPVP%20Project%20Factsheet%20%28JH%29%20V3.pdf>

34. UNDP (2021), Endline survey report "Knowledge, Attitude and Practice on Explosive Ordnance Risk in Quang Binh and Binh Dinh in 2021", Korea-Vietnam Mine Action Project.

35. Judge, Hal, "Integrated Approaches to EORE in ASEAN Member States," Phnom Penh, ARMAC, April 2020.

36.

37.

38. VNMAC, "Various favorable policies for UXO victims actively and effectively implemented," 21 December 2019

39. Project Renew, Renew Meet Local Partners to Evaluate Disability Support Program In 2019-2020 And Discuss Action Plan For 2021, 21 December 2020

40. Project Renew, "Renew Holds Workshop to Implement Dissemination of the Law on Persons with Disabilities to Communities and Support Activities in the Post-COVID-19," 20 May 2020.

41. UNDP (2021), Korea-Vietnam Peace Village Project Brief

42. CSR (April 2015). Mine Risk Education in Vietnam, the Journal of ERW and Mine Action, Volume 19, Issue 1, Article 8.

# CHAPTER 3: METHODOLOGY

## 3.1. APPROACH

This is a cross-sectional study using a mixed method approach. The study was conducted over a period of one month in the provinces of Quang Binh and Quang Tri. A qualitative approach was applied to explore the perspectives of the different local stakeholders on the implementation of humanitarian mine action within their communities. In addition, stakeholders working in the humanitarian mine action sector were interviewed. A survey was conducted to provide quantitative data which provides an overview of how impacted communities have been involved in mine action, and how levels of risk and livelihood opportunities have changed following mine action activities.

## 3.2. SCOPE OF STUDY

### Study participants:

The study participants included people living in UXO contaminated areas, including villagers who used or farmed the land, UXO victims and other people with disabilities, and the local authorities, including representatives of the Provincial People's Committee (PPC) and army representatives. As much as possible, efforts were made to include a diversity of local people, including women, elders, and people of varying ethnicity. Interviews were also conducted with representatives of VNMAC and the national and provincial mine action centres and of international non-governmental organisations (INGOs) working in mine clearance, risk education and victim assistance.

### Target locations:

The study was undertaken in three districts in Quang Binh province and three districts in Quang Tri province. Criteria for selection of the target communities included:

- UXO contamination and UXO accidents;
- Humanitarian mine action operators present and conducting survey, clearance, risk education or victim assistance;
- Examples of where communities have been involved in mine action activities in different ways;
- Examples of where cleared land has been used by communities for different purposes.

Selection of the districts and the target communities was done in collaboration with the provincial authorities.

**Quang Binh province:** The three districts with mine/UXO contamination selected for the study in Quang Binh province were Minh Hoa, Quang Ninh, and Le Thuy districts:

- Minh Hoa district is a mountainous district located in the northwest of Quang Binh province. The district comprises 15 communes and one town with an area of 1,410 km<sup>2</sup>. The district population is over 49,000 people.
- Quang Ninh district is 7 km south of Dong Hoi city. The total area is 119,089 hectares and the population is over 90,000 people.
- Le Thuy district is comprised of plain. The district borders Lao PDR in the west and the coast to the east. The district area is 1,416.11 km<sup>2</sup> with 141,380 people (2012).

**Quang Tri province:** The three districts with mine and UXO contamination selected for the study in Quang Tri province were Gio Linh, Cam Lo, and Dong Ha City:

- Gio Linh district is a coastal district in Quang Tri province with a total area of 474 km<sup>2</sup>. The population of the district is 75,276 people.
- Cam Lo district is in central Quang Tri, bordering Dong Ha city to the east and Dakrong district to the west. The land area is 347.1 km<sup>2</sup> and the population comprises 46,231 people.
- Dong Ha city is also located in the center of Quang Tri, with an area of 72.95 km<sup>2</sup> and a population of 84,157 people.

Table 3.1. Target Provinces, Districts and Villages

Province	District	Commune	Village	Sample
Quảng Bình	Lệ Thủy	An Thủy	Lộc Thượng	16
			Lộc Hạ	16
		Nông Trường Lệ Ninh	Resident group No. 2	16
			Resident group No. 6	16
		Võ Ninh	Tiền	17
			Hà Thiệp	17
			Trường An	17
			Bắc Ngǔ	17
	Đồng Hới	Đức Ninh	Đức Thủy	17
			Đức Hoa	17
		Nghĩa Ninh	Trung Nghĩa 5	17
			Trung Nghĩa 6	17
		Cam Lộ	Cam Thủy	17
			Lâm Lang	17
			An Mỹ	17
			Tân Lập	17
Quảng Trị	Đông Hà	Phường 3	Resident group No. 1	17
			Resident group No. 2	17
		Đông Giang	Resident group No. 4	17
			Resident group No. 5	17
		Gio Linh	Lệ Môn	17
			Lan Đình	17
			Trúc Lâm	17
			Vinh Quang Thượng	13

Twelve communes were selected for the study (two communes per district), and within each commune, two villages were selected based on discussion of the criteria with the local authorities.

### 3.3. TARGET GROUPS AND SAMPLING APPROACH

The following approaches were used to gather information from the study participants:

- Household members were interviewed using a survey tool to collect quantitative data.
- In-depth qualitative data was collected through Key Informant Interviews (KII) and Focus Group Discussions (FGD). Interviewees included representatives of VNMAC, HMA organizations, Provincial Mine Action Centres, the District Red Cross, deminers and UXO/MRE Educators, UXO victims/survivors, district and commune authorities and village residents.
- Research participants were selected based on inclusion and exclusion criteria as explained in the table below.

**Table 3.2. Criteria for the selection of respondents**

<ul style="list-style-type: none"><li>• Residing in the study area with a registered household for a minimum of 1 year</li><li>• At least 18 years of age</li><li>• Husband or wife 18 – 60 years (could be a household head) currently living there</li><li>• Household using or cultivating land in the community</li><li>• Consented to participate in the study.</li></ul>	<ul style="list-style-type: none"><li>• Newly arrived household (within 1 year)</li><li>• Under 18 years of age</li><li>• Not present at the time of the survey</li><li>• Did not provide consent to participate in the survey</li></ul>
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#### 3.3.1. QUANTITATIVE DATA (HOUSEHOLD SURVEY)

The sample size of study was determined with the following formula:

$$N = \frac{Z_{(1-\alpha/2)}^2 P(1-P)}{d^2} \times IR \times DE [1]$$

Of which:

- $Z_{1-\alpha/2}$ : Standard error corresponding to the 95% confidence level (1.96)
- $P= 0.5$  ( $P$  is the percentage of community adults involved in mine action. As information was not available on this figure, using  $P=50\%$  in this formula aimed to produce the highest possible sample size)
- $d=$  Margin of error (0.07)
- $DE$  (Design effect): because simple random sampling is not applied, the sample size should multiply with the design effect.  $DEFF = 2$  is used in this survey
- $IR$  is rate of incomplete survey in the interviews, and it is about 5% for developing countries

Since the sample was selected from finite populations of roughly 400,000 households in Quang Binh and Quang Tri (GSO, 2018), the sample size calculated using the formula [1] was adjusted according to the calculation formula [2] as follows:

$$N(\text{adjust}) = \frac{N}{1 + \frac{N-1}{\text{population}}} [2]$$

Thus, the final sample size was **400 households** in both provinces after rounding up.

### 3.3.2. QUALITATIVE DATA

The study included KII with representatives from the Provincial MAC, the district red cross, deminers/EORE educators, UXO victims/survivors, representatives of INGOS (demining organisations), and local authorities. A purposive sampling approach was applied to select respondents for qualitative interviews, ensuring that people with relevant information were interviewed.

The target groups for FGD included deminers, UXO/MRE Educators, commune authority, and local residents. The group size was three people per one group of deminers/EORE educators and five people per one group of local residents. Deminers and UXO/Mine Educators were interviewed separately. The research team requested the operators to assign deminers and UXO/MRE Educators to participate in the FGDs. The participants from the commune authorities included the chairman/vice chairmen, representatives from the women's union, youth union and village leaders, who are in charge day-to-day administration of the village, including working with demining operators. FGDs were conducted with separate male and female groups of residents. The research team tried to include people from diverse backgrounds in terms of gender, age groups, occupation, and ethnicity.

**Table 3.3. Actual Sample Size Of Qualitative Study**

No	Description	KII - Sample			FGD - Sample		Note
		Quang Binh	Quang Tri	Hanoi	Quang Binh	Quang Tri	
1	CRS			1			Representative of CRS
2	HMA organizations (MAG, NPA, Peace Trees Vietnam, and Project Renew)	0	4				Representatives of international HMA organizations who participated in HMA projects, activities
3	Provincial MAC (Quang Tri MAC and Quang Binh DBCU)	1	1				Representative of provincial MACs
4	District Red Cross	1	2				Representatives of two district red cross having active role/activities in HMA in each province
5	Deminers and UXO/MRE Educators		1 (with Project Renew Education Officer on UXO Risk)		2 groups (1 group of deminers, 1 group of risk educators): 4 people/ group	1 group (1 group of deminers) 3 people/ group	Target deminers and risk educators was selected based on consultation with local MAC in each province. Deminers and risk educators can come from different organizations to be gathered at the same place for FGD
6	UXO victims/survivors	3	3				Consulted with local MAC based on the available list of UXO victims/survivors
7	Commune and village authorities	4 (2 per each)	2 (one per each)				Representatives of 12 commune/ village authorities having active role/activities in HMA
8	Local residents				2 groups (5 residents per group *2 groups = 10)	2 groups (5 residents per group *2 groups = 10)	6 districts with local residents being active role/activities in HMA in two provinces.
<b>Total</b>		<b>23 respondents</b>			<b>7 groups (31 respondents)</b>		

### 3.3.3. SAMPLING

#### For Quantitative Survey



The following process was proposed for sampling selection:

- The research lead revised the roster of communes in the specified six districts, followed by the selection of two communes from each district based on the extent of UXO contamination and the mine action activities occurring in the communes.
- Two villages where mine action was taking place were selected in each commune.
- The research lead worked with the Commune People's Committee to list all households according to the criteria, and 16-17 households from each commune were selected for the study (see details at Table 1).

#### For Qualitative Survey

- KIIs: The research team purposively selected participants with expertise or experience of mine action activities, including survey and clearance, risk education and victim assistance.
- FGDs: Participants were purposively selected with an emphasis on ensuring gender and age balance in each group to facilitate comprehensive discussions.

### 3.3.4. HOUSEHOLD MEMBER SELECTION

In a selected household, one eligible household member was interviewed. Those who were eligible for the interviews had to be 18 years or older. All potential participants were asked for their consent to be interviewed. If there were two people within one household matching the research criteria, the selection was made based on which one of them had the most knowledge of mine action activities in the village. If an eligible household member was not at home during the visit, that household was skipped, and the interviewer moved to the next closest household. To minimize bias due to the characteristics of some groups (such as farmers who were working the land or government officers), who usually were not home during the time of visit, the interviewer conducted these visits multiple times during the day.

## 3.4. DATA COLLECTION

- Experienced enumerators were selected by AMDI and trained before the field trip. The enumerators were local people working for the Red Cross and Youth Union in Quang Binh and Quang Tri provinces, who had worked with AMDI in previous surveys on UXO in Quang Binh and Quang Tri.<sup>43</sup>
- Training was conducted over one day in each province for the 10 enumerators and 01 supervisor participating in the research. The participants were trained in interviewing methods, using questionnaires techniques, and guidance on how to monitor the data collection process to ensure the quality of data collection. All interviews were conducted face to face and within households.

43. Specifically, a Knowledge, Attitudes and Practices (KAP) survey for UNDP as part of the Korea-Vietnam Mine Action Project (KV-MAP).

44. A social media platform used in Vietnam. See Ministry of Information and Communications - <https://ictvietnam.vn/zalo-hien-da-co-hon-75-trieu-nguo-dung-thuong-xuyen-58220.html>

- The survey was designed for mobile devices (Android smartphones) using the Kobo Toolbox data collection platform.
- The questionnaire was field-tested in a commune not included in the research, but with a similar context to the research communes, one day prior to the survey starting. This ensured that the questions were understandable, and that the data collected was usable. After the testing, the questionnaire was modified accordingly with the local dialect.
- Data collection was monitored and managed by a supervisor and research lead. The supervisor conducted daily checks on the mobile devices to ascertain that data was successfully and accurately entered and uploaded to the server. 20% of the completed questionnaires were checked by the research lead.
- KIIs and FGDs were conducted by AMDI researchers and a team leader with substantial experience in conducting qualitative research. Interview schedules and invitations were transmitted to participants via Zalo.<sup>44</sup> The AMDI researchers reestablished contact with participants one day prior to the scheduled interview. Interviews and discussions were held in private, tranquil settings in the field to ensure the collection of high-quality information. The AMDI researchers articulated the purpose of the interview, sought permission to record, and employed KII and FGD guidelines to conduct interviews, also recording responses in a notebook. When the information provided was unclear, the AMDI researchers requested clarification from participants.

3.5. Data analysis

### **Quantitative Survey**

- The data was exported to Excel or CSV formats and imported to Stata v15 software for data analysis.
- The survey results are presented as numbers, frequencies and proportions in the description of the general characteristics of the study participants (location, occupation, education level, age group, venue etc.).
- $\chi^2$  test was used to compare variables in the extent of community participation and perceptions related to UXO clearance, education, and victim assistance between Quang Tri and Quang Binh, household economic condition, gender or educational level with 3 levels of significance at  $p<0,05$  (\*),  $p<0,01$  (\*\*), and  $p<0,001$  (\*\*\*)

### **Qualitative Survey**

- AMDI researchers and research assistants transcribed the interview details in the field and transferred the notes into Word 2020.
- Interview records were organized by type (KII or FGD), with subject type and interview date specified for easy tracking and reference during data coding (e.g., KII\_province MAC\_20230228 or FGD\_educator\_20230226).
- A primary code table to code information from Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs) was established based on interview content. Sub-codes were created beneath the main codes. The coding process was conducted using Excel 2020.
- The qualitative research findings are used to complement and explain the quantitative household research results.

## **3.6. ETHICAL CONSIDERATIONS**

- Oral informed consent was requested from each participant in the study. All researchers and interviewers were trained how to approach the potential study participants and obtain consent. The consent form with information about the study, confidentiality, rights of participants, reimbursement, and contact numbers were introduced to participants prior to interviews taking place.
- The questionnaire recorded the name of the participant. Data was uploaded on a secure server once the mobile devices were connected to the Internet. The data was downloaded and saved in specified computers in the form of excel or CSV files and then converted into Stata format for further data analysis. Only authorized researchers have access to the database online or the ones that have been downloaded. The dataset will be saved on the computer for at least 3 years at the AMDI office.
- Personal information was withdrawn from all transcripts. An identification code was assigned for each participant, and the list of codes was kept separate from the data. All records were kept separate from the transcripts and on a secure hard disk.

# CHAPTER 4: RESEARCH FINDINGS

## 4.1. GENERAL INFORMATION

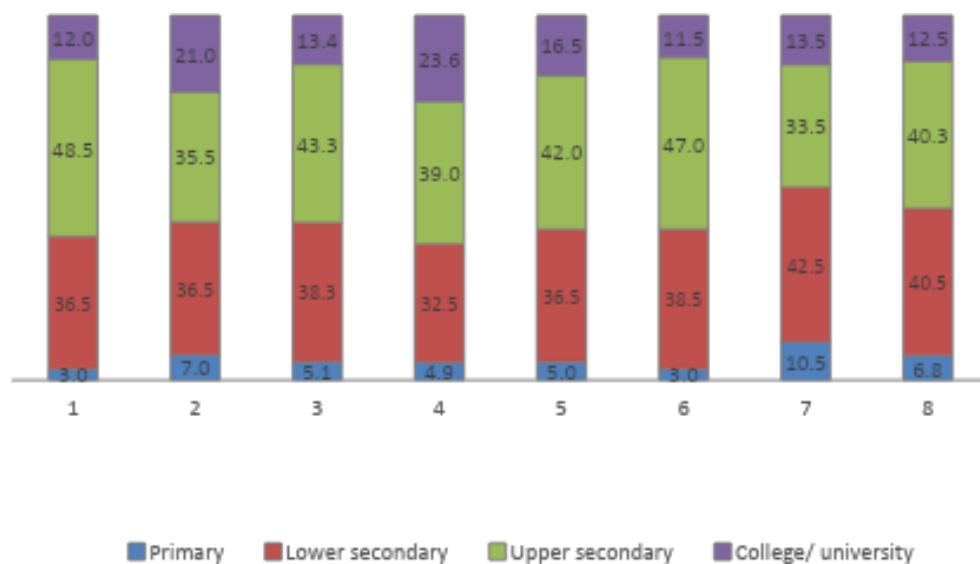
Table 4.1. General Information On Survey Respondents

Indicators	Quang Binh (n=200)	Quang Tri (n=200)	Overall (n=400)
Household size (mean $\pm$ SD, min-max)	$3.6 \pm 1.4$ (1-7)	$4.1 \pm 1.2$ (1 - 9)	$3.8 \pm 1.3$ (1 - 9)
Household has UXO victims (%)	1.5	2.5	2
Household monthly income category (%)			
$< 1,500,000$ VND	0.5	0	0.25
$1,500,000 - 3,000,000$ VND	40	33.5	36.8
$3,000,001 - 5,000,000$ VND	35	27	31
$5,000,001 - 7,000,000$ VND	13.5	21.5	17.5
$7,000,001 - 10,000,000$ VND	8.5	14.5	11.5
$> 10,000,000$ VND	2.5	3.5	3
Age of survey respondent (mean $\pm$ SD, min-max)	$46.6 \pm 8.6$ (24 - 68)	$45.7 \pm 9.2$ (24 - 65)	$46.1 \pm 8.9$ (24 - 68)
Age of household head (mean $\pm$ SD, min-max)	$46.9 \pm 8.5$ (24 - 68)	$50.5 \pm 11.5$ (30 - 97)	$48.7 \pm 10.2$ (24 - 97)
Sex of survey respondent (%)			
<i>Male</i>	78	60.5	69.3
<i>Female</i>	22	39.5	30.8
Sex of household head (%)			
<i>Male</i>	84	76.5	80.3
<i>Female</i>	16	23.5	19.8

In the survey of 400 households, the average household size was four people. Households in Quang Tri province had on average more members than those in Quang Binh province. The proportion of households with UXO victims was low, only eight households out of 400 (2% of the total sample). Most households had an average monthly income of less than 5 million Vietnam Dong (VND) (approximately USD198), with more households in Quang Binh having an average monthly income of less than 5 million VND. One-third of the surveyed households had an income of more than 5 million VND, with Quang Tri province having a higher proportion of such households compared to Quang Binh province. The data indicates that Quang Binh and Quang Tri are among the poorest provinces in the country, which is consistent with data from the General Statistics Office.<sup>45</sup> The average annual income per capita in Quang Binh is 36.25 million VND and in Quang Tri is 33.82 million VND, both of which are lower than the national average of 46.73 million VND.

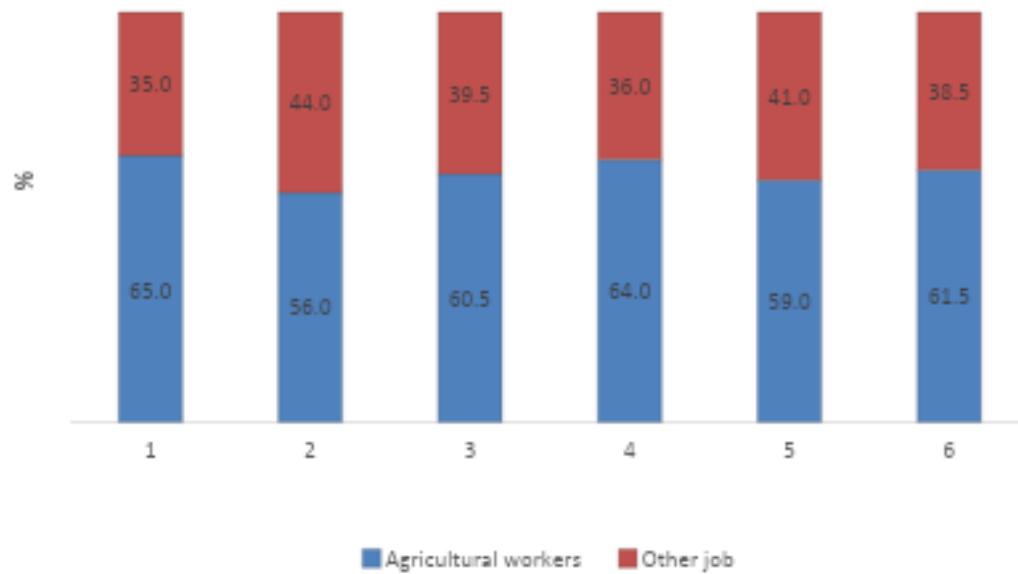
The average age of the household head was 49, while the average age of survey respondents was 46. The majority of household heads (80.3%) and survey respondents (69.3%) were male. The proportion of male household heads and respondents in Quang Binh were higher, compared to Quang Tri.

45. GSO (2022). Vietnam Living Standard Survey Report



**Figure 4.1. Educational Level Of Survey Respondents And Household Heads**

In terms of education level, the majority of household heads and respondents had completed high school (40.3% and 42%, respectively) or secondary school (40.5% and 36.5%, respectively). Quang Binh province had a higher rate of high school completion compared to Quang Tri province. Among survey respondents, a higher proportion of men had completed primary, lower secondary and upper secondary than women, although a higher proportion of women had a university education compared to men.



**Figure 4.2. Occupation Of Survey Respondents And Household Heads**

The districts of Minh Hoa, Quang Ninh and Le Thuy in Quang Binh province largely depend on agriculture, forestry, and fishing as their primary economic activities. These areas are predominantly rural, with most people engaged in subsistence farming and small-scale agriculture. In contrast, Gio Linh, Cam Lo and Dong Ha City in Quang Tri province are more diverse economically. Dong Ha City has a growing service sector and industry. People in Quang Tri work in manufacturing, trade and services in addition to agriculture. From the survey respondents, the majority of household heads (62%) were farmers, although there were more respondents in Quang Binh working as farmers (64%), than in Quang Tri (36%).

**Table 4.2. Qualitative Research Respondent Data**

Indicators		Number	%
Sex	Male	31	57
	Female	23	43
Unit	NGOs	17	31
	Provincial level	2	4
	District level	3	6
	Commune level	2	4
	Village level	30	55
Position	Officers	28	52
	Residents	20	37
	UXO victims	6	11
Type of interview	KII	23	43
	FGD	31	57

In total, 54 individuals participated in the KIIs and FGDs, with men representing a higher proportion than women. Thirty participants were interviewed at village level (including village authorities, residents, and victims), two from commune level, three from district level and two from provincial level. Seventeen representatives from NGOs, all national staff, were interviewed. The NGOs included CRS, MAG, PTVN, Project Renew, and NPA. 57% of participants took part in the FGDs, while 43% were involved in the interviews.

**Table 4.3. Number Of Years Working In The HMA Program Of KII Respondents**

Level	Organization	# year, year
NGOs	Representative of the Mine Action Program Manager, CRS	3 years, started in 2021
	Representative of the MAG in Quang Tri	15 years, started in 2009
	Representative of PTVN in Quang Tri	20 years, started in 2004
	Representative of the Project Renew in Quang Tri	17 years, started in 2007
	Manager of the NPA in Quang Tri	17 years, started in 2007
Province	Representative of QTMAC	5.5 years, started in 2019
	Representative of the Quang Binh DBCU	3.5 years, started in 2020
District	Representative of the Le Thuy District Red Cross Society (RCS)	8 years, started in 2016
	Representative of the Cam Lo District RCS	11 years, started in 2013
	Representative of the Dong Ha City RCS	9 years, started in 2015

(Source: KIIs with representatives of agencies and organizations at the central, provincial, and district levels)

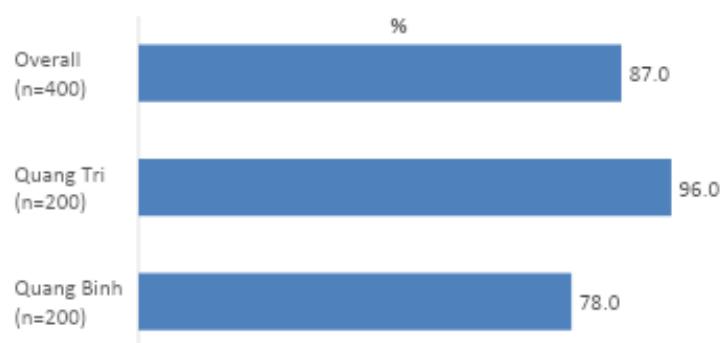
## 4.2. UXO CLEARANCE

**Table 4.4. Information For UXO Contamination On Household Or Farming Land**

Indicators	Quang Binh (n=200), %	Quang Tri (n=200), %	Overall (n=400), %
Land have UXO contamination			
<i>Yes, it has UXO</i>	8	0	4
<i>Yes, it had UXO previously</i>	6	15	11
<i>No</i>	38	44	41
<i>Don't know</i>	47	41	44
	(n=29), %	(n=30), %	(n=59), %
Ever asked for UXO clearance from operator	24	90	60

Of the survey respondents, 4% of households believed their land currently contains UXO, and 11% reported their land was contaminated with UXO in the past. Of those who reported their land was contaminated in the past, 60% of these households have contacted relevant clearance agencies. Quang Tri province shows a higher rate of proactive contact to request clearance than Quang Binh province (90% vs 24%).

**Table 4.5. Information On Requirements For UXO Clearance For Household Land**



Nearly 90% of survey respondents indicated that they or their spouses were responsible for requesting the clearance of unexploded ordnance (UXO). The majority of clearance requests were to remove UXO from garden land (55.9%) and household land (38.2%), with fewer requests pertaining to agricultural and forest land. In Quang Binh, people tend to request more clearance on household and farming land, whereas in Quang Tri, the requests are more focused on clearing garden land. People requested the clearance of garden land for reasons such as “*to safely grow vegetables and fruit trees*” or “*to build houses or cattle pens to develop their livelihood*” (FGD, residents, Loc Thuong 1 & 2, An Thuy commune, Le Thuy dist.).

The main methods used to request the clearance of found UXO (spot tasks) included verbal communication with village authorities (88%), showing evidence of UXO to operators when they work in the village (44%), and talking directly with UXO operators during their work (35%). Notably, the number of households providing evidence of UXO to operators during the clearance request process was higher in Quang Tri than in Quang Binh, perhaps because operators have been present for a longer time in Quang Tri than in Quang Binh. The qualitative research results indicate that people did actively participate in reporting mines and UXO. As one respondent remarked, “*People are often actively involved in reporting information related to mines and UXOs that they discover in their area. In localities where people understand and cooperate, these activities are implemented very quickly*” (KII, representative of the Quang Tri Province MAC).

Both Quang Tri and Quang Binh have a hotline number which people can ring if they come across UXO. Residents in Quang Tri district mentioned reporting UXO directly through the provincial MAC hotline. “*If people are aware, they will call the hotline directly. I always call the hotline myself because I know the process*” (FGD, residents, Tam Hiep village, Cam Thuy commune, Cam Lo dist.).

According to provincial Quang Tri MAC staff, the hotline receives a significant number of calls, and the information provided is usually accurate *“Every day, QTMAC receives 5-7 calls from residents reporting the discovery of UXO in the area, totaling about two hundred calls each month”* (KII, representative of the Quang Tri Province MAC). In Quang Binh district, some respondents also said that they reported UXO to the local authorities, who would then contact the hotline. *“First, report to the village chief, and then the village chief contacts the hotline”* (FGD, residents, Tam Hiep village, Cam Thuy commune, Cam Lo dist.).

People interviewed in the focus group discussions in both Quang Tri and Quang Binh said that operators responded quickly to reports of UXO. As one respondent explained, *“The response time is very fast; they will arrive within 30 minutes to an hour. If the explosive object needs to be excavated, it may take longer, depending on the terrain, but the situation is addressed promptly, day or night, without delay from one day to the next.”* The majority of clearance requests seem to have been addressed, with 94% of respondents reporting that UXO they reported had been dealt with. Requests for clearance are typically made by the male members of the family. As one respondent noted, *“my husband is very social, so he takes care of this.”* Deminers and risk education operators interviewed also agreed that most of the communication regarding UXO to be cleared was through male members of households.

**Table 4.6. Clearance Of UXO On Household Or Farming Land**

Indicators	Overall % (n=32)
The UXO operator	
Remove/destroy the UXO	28
Clear the land	71.9
How long it takes from the request to be cleared of UXO	
1-2 days	93.8
One week	6.3
Household involved the clearance operation	72
Find any evidence of UXO on the land after it had been cleared	31
Feel safer using the land after clearance	100
Satisfaction level	
Very satisfied	25
Satisfied	75
There is other land that would like to have cleared	9

Respondents reported that either UXO had been cleared from their land, (28%) or that their land had been cleared (72%). However, it is likely that respondents did not always understand the difference between spot task clearance, where a found UXO is removed, compared to area clearance of land. In most cases (94%), respondents reported that the removal of UXO was completed in one to two days. A third of respondents (31%) said they had found more UXO on their land after some UXO had been removed. All participants said that they felt safer using their land after UXO had been removed. People were largely satisfied with the clearance process. Around 9% of interviewees said that they would like more of their land cleared of UXO.

The importance of participation from the community in the UXO clearance process was explained by a representative from NPA in Quang Tri: *“Community participation is crucial as local residents are familiar with the terrain and areas affected by pollution, allowing them to provide detailed information about the location of UXO to the operators, allowing them to plan effective clearance activities.”* (KII, representative, NPA Quang Tri). Nearly 72% of survey respondents indicated that they and their families participated in supporting UXO clearance activities. Community members often provided information on the location of UXO. Many of the village respondents were aware that while they were able to report when they found UXO, they should not take action to touch or move the item. As one resident explained, *“We only provide information and show them the marked locations.*

*They also advise people to stay away and notify the relevant authorities to handle the situation”* (FGD, residents, Tan Lap village, Cam Tuyen commune, Cam Lo dist.).

Furthermore, local people collaborated with authorities to ensure that villagers do not enter the UXO area before clearance team arrives. At a FGD in Le Thuy district, it was explained that *"When explosives and mines are discovered, locals report to the authorities and wait for waiting for the mine action organization and officials to address the issue. The village also informs residents about the presence of UXO in the area to keep people away from these areas,"* (FGD, residents, Loc Thuong 2 village, An Thuy commune, Le Thuy dist.).

There are no policies among the clearance organizations regarding the participation of local people in cutting back vegetation prior to land clearance. However, some residents said that they supported the work of the clearance teams by clearing land, cutting back crops, and removing trees under their guidance and supervision. One respondent explained, *"Villagers support UXO clearance by providing help to remove trees and crops, with village government oversight. Once the land is cleared, there are no further impacts from UXO"* (FGD, residents, Loc Thuong 2 village, An Thuy commune, Le Thuy dist.). Another respondent reported being too afraid to help with the clearance of land: *"We provide the necessary conditions for the clearance teams to work, though I personally avoid participating due to fear. The teams use machinery and protective gear. When they identify bombs or suspected mines, we allow them to destroy any trees in the area"* (FGD, residents, Tam Hiep village, Cam Thuy commune, Cam Lo dist.).

Some village respondents mentioned that the clearance process had damaged their crops, but that they still supported the clearance team, as ensuring safety was their top priority: *"Despite the clearance damaging our crops and rice, we decided to proceed immediately for the safety of our family"* (FGD, residents, Tan Lap village, Cam Tuyen commune, Cam Lo dist.). In addition, some residents also expressed appreciation for UXO clearance efforts on public land, stating that they support the clearance teams by cooking for them during their work in the village. As one deminer mentioned, *"When the clearance team works, the villagers often prepare meals for us"* (FGD, deminers, NPA). Similarly, some residents shared, *"They help clear mines and bombs to make the land safe for cultivation, so we are very grateful and often invite them to small meals"* (FGD, residents, Tan Lap village, Cam Tuyen commune, Cam Lo dist.).

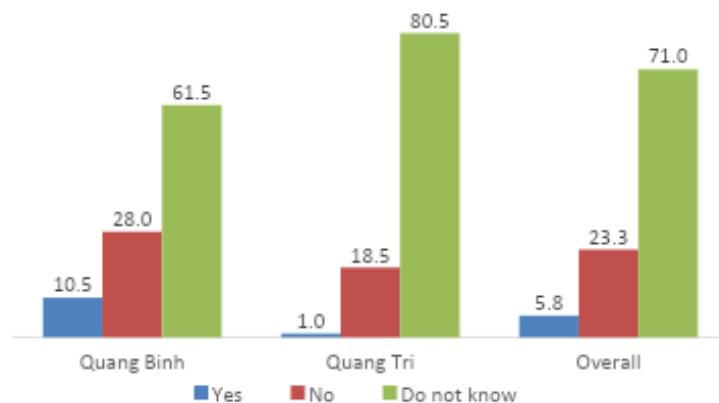
**Table 4.7. How Communities Support UXO Clearance On Their Land**

Indicators	Over all (%)
Support the clearance operation (n=23)	
<i>Cleared vegetation before clearance</i>	96
<i>Provided information to UXO Operator on where I found UXO</i>	78
<i>Provided information to family and neighbors about the clearance and marking</i>	65
<i>Provided food for the clearance team</i>	4
UXO Operator provide you with information on what had been cleared and to what depth after clearance (n=9)	78
Requested for clearance for 2nd time on the same land (n=22)	9
Using the land that was cleared of UXO (n=10)	
<i>Yes, all of it</i>	90
<i>Yes, some of it</i>	10

Post-clearance, land is officially handed over to households during a meeting with the operators, authorities and involved villagers. As a deminer in Quang Tri explained, *"After the clearance, the community is informed and participates in a meeting to officially hand over the cleared land. This activity is organized and conducted by the commune authorities and QTMAC"* (FGD, deminers, NPA). Nearly 80% of respondents reported receiving written information regarding the clearance process and the depth of the cleared area. An interview respondent said, *"After finishing the work, we attended a village meeting where the operator informed families about the clearance and the destruction of bombs and mines, as well as the areas that were cleared"* (FGD, residents, Tam Hiep village, Cam Thuy commune, Cam Lo dist.).

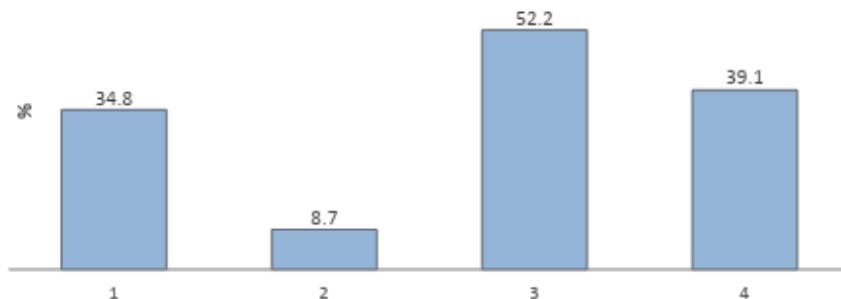
The majority of survey respondents reported using the land after clearance (90%), although 10% said that they only used some of it. The fact that not all land is used after UXO clearance may be due to several factors, including that some households find other occupations that are more profitable than farming. Some residents explained

that, "After the clearance, a portion of my family's land was left unused because some family members had relocated to Da Nang city to work as Grab [taxi] drivers" (FGD, residents, Loc Thuong 1, An Thuy commune, Le Thuy dist.).



**Figure 4.3. Knowledge Of UXO On Public Land**

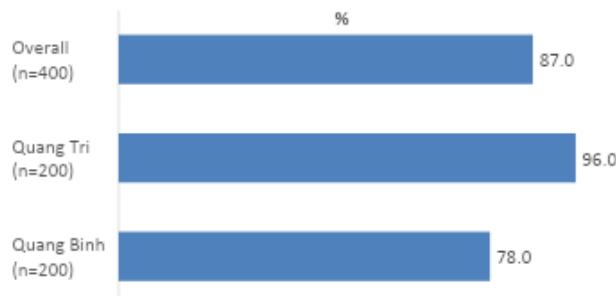
Most survey respondents (80% of respondents in Quang Tri and 62% in Quang Binh), were unaware that UXO had previously been present in areas of public land (such as land for pagodas, village buildings or schools). This may partly be due to a lack of attendance at village meetings. As one participant noted, "We rarely fully participate in village meetings due to our busy work schedules throughout the year" (FGD, residents, Tam Hiep village, Cam Thuy commune, Cam Lo dist.; Loc Thuong 1 village, An Thuy commune, Le Thuy dist.). Representatives from MAG and NPA reported that often it was leaders from village departments that were invited to attend rather than villagers. As one representative explained, "When discussing clearance work, we mainly invite leaders from the women's union, youth union, farmers' union, and veterans' association to participate" (FGD, residents, Loc Thuong 2 village, An Thuy commune, Le Thuy dist.). Decisions on clearance requests are made based on agreement by these village representatives. In some villages, discussions had not taken place to request UXO clearance on public land: "In recent years, our village has not had any meetings to discuss the issue of UXO clearance on the village's common land" (KII, village leaders, Ha Thiep village, Vo Ninh commune, Quang Ninh dist.)



**Figure 4.4. UXO Clearance On Public Land**

Approximately 35% of survey respondents reported attending a village meeting to discuss the clearance of UXO on public land. Over 52% of respondents indicated that the village authorities had not made such a request for clearance of community land, and 30% of respondents were unaware as to whether such a request had been made. Some of the organization representatives explained that community land was often cleared to support social development projects, such as building roads to schools. A MAG staff member who had been involved in the work explained, "Previously, the school had no entrance road. MAG support the clearance of the land so that a road could be built to allow students to enter the school safely, and to keep the construction on time. When the work was finished, the teachers, parents and everyone was happy because they were safe and the school entrance looked more beautiful" (KII, representative, MAG). Another project to clear public land was for a children's playground. Sometimes the clearance of public land was conducted in collaboration with other organizations which sponsored the construction of buildings for community learning centers, schools, or health centers. A representative from PTVN in Quang Tri explained, "organizations like PLAN sponsor the construction of community learning centers, schools, or health centers and coordinate with PTVN to clear the UXO in the area where the projects will be implemented" (KII, representative, PTVN in Quang Tri). Some residents also acknowledged the benefits of UXO clearance on public land, noting that, "the cleared communal areas are utilized by the government for social development projects in the village such as the construction of a cultural center or a kindergarten for children" (FGD, residents, Tan Lap village, Cam Thuy commune, Cam Lo dist.).

### 4.3. RISK EDUCATION



**Figure 4.5. Received UXO/Mine Risk Education Messages In The Last 5 Years**

Nearly 80% of survey respondents reported having received UXO/mine risk education over the past five years. More respondents in Quang Tri reported receiving risk education (96% compared to 78% in Quang Binh) which could be explained by the fact that there are more mine action organizations based in Quang Tri province, and mine action activities have been conducted for longer. Deminers in Quang Tri explained that, *"Quang Tri has many projects on UXO, so the coverage is more extensive than in Quang Binh"* (FGD, deminers in Quang Tri).

**Table 4.8. How Mine/UXO Risk Education Messages Have Been Received**

Indicators	Quang Binh % (n=200)	Quang Tri % (n=200)	Overall % (n=400)
UXO/ mine risk education channels	(n=156)	(n=192)	(n=348)
Attended a meeting in the village	39	73	58
Watched a performance, exhibition or drama	9	42	27
Heard the messages on radio or TV	97	79	87
Saw a poster or leaflet	35	41	38
Received the messages digitally (on phone app, Facebook)	35	38	37
Received messages from a UXO clearance team	5	27	17
Received messages from village authority	3	7	5
Received messages from friend/neighbor	1	9	5
Understood clearly the UXO/ mine risk education message			
Very clearly	6	14	10
Clearly	79	66	72
Not clearly	15	20	18
Usefulness of the UXO/mine risk education messages			
I can recognize what UXO and mines look like	53	82	69
I understand the danger of the UXO/mines	85	96	91
I know what to do if I find a UXO	48	73	62
I can provide information to my family to keep them safe	32	62	48
I know how to report a UXO I find	24	60	44
I can work more safely in my fields	17	53	37
Frequency received messages on UXO/mine risk education from UXO staff or village authorities in the last 5 years			
One time	58	44	51
2 - 5 times	38	53	46

The majority of survey respondents said that they had received risk education information via radio or TV (87%) or village meetings (58%). Residents of Quang Binh were more likely to receive risk education messages through radio or TV, while residents of Quang Tri are more likely to receive these messages through village meetings. Most respondents (nearly 82%) reported a clear understanding of the risk education messages and 91% said that they found the information useful in terms of understanding the dangers or recognizing what UXO and mines might look like (69%). This was also confirmed by the Quang Tri MAC staff who said, *"Over 95% of UXO reports from local people are accurate because local people know quite a lot about mines and bombs; sometimes they know even more than the clearance staff"* (KII, representative, QTMAC). However, 18% of respondents said that they felt the risk education messages were not clear. This could perhaps be due to a lack of formal education of literacy, preventing them from reading messages.

During the qualitative interviews, respondents mentioned many different methods through which they had received risk education, although the frequency of implementation was low and often failed to attract participation from all of the villagers. As such, people reported that they had not received risk education many times in the last five years. The same was true with the survey respondents: 51% of survey respondents reported that they had received risk education once in the past five years, while 46% said they had received it two to five times. The percentage of people who received the message only once was higher in Quang Binh than Quang Tri, which again could be attributed to fewer organizations working in that province. In Quang Tri over 50% of the survey respondents reported receiving the message more than once in the last five years.

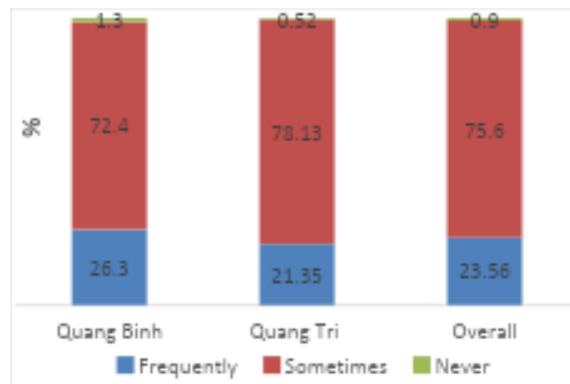
Risk education activities in the community primarily involved direct reminders from village authorities. FGD participants explained, *"In village meetings, the authorities remind people to be cautious, report any suspicious objects, and avoid handling UXO due to the risk of explosions. However, these reminders often do not include formal training"* (FGD, residents, Loc Thuong 1 village, An Thuy commune, Le dist.). However, in addition to these informal reminders during village meetings, several of the mine action organizations coordinate with the district Red Cross and local authorities to provide risk education sessions during village meetings. *"During these meetings, officials from international organizations and representatives from MAG and the Red Cross visit villages to educate residents about preventing UXO accidents"* (KII, DRC representative, Cam Lo dist., Le Thuy dist).

Other methods include indirect communication via the commune's loudspeaker system or during special events and meetings at village level: *"Communications are coordinated through local meetings and loudspeaker announcements, but are not conducted as standalone events. Information about bombs and mines is also relayed through the commune's FM radio"* (FGD, residents, Loc Thuong 2 village, An Thuy commune, Le Thuy dist.).

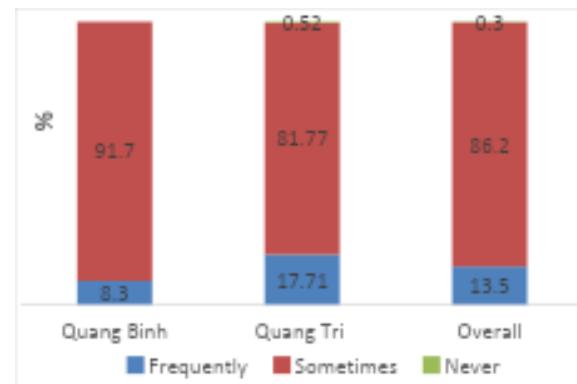
Mine action operators noted a number of different methods by which they provided risk education. Project Renew has incorporated risk education into children's football competitions, with prizes for participants. Communities were also engaged through competitions held at commune level by the Women's Union and the Youth Union in collaboration with organizations like CRS and MAG. FGD participants recalled, *"In our village, a team performs a skit about bomb and mine accidents for the entire community. This approach is highly effective as it combines entertainment with education, making the message more memorable compared to flyers alone"* (FGD, residents, Tam Hiep village, Cam Thuy commune, Cam Lo dist.). The involvement of socio-political organizations such as the Fatherland Front, the Youth Union, the Women's Union, and the Veterans' Association was seen by some to be important. A representative from CRS explained, *"These organizations, often led by individuals with direct war experience, effectively educate the community about the dangers of mines and UXOs. For instance, a retired veteran who is also the chairman of the Red Cross Association actively promotes risk information"* (KII, Mine Action Program Manager, CRS). However, some villagers felt that the methods used by some of these groups were not engaging. As one noted, *"while veterans provided excellent examples of distinguishing between different types of bombs, they did not use illustrative images. As a result, the outreach was neither engaging nor effective"* (FGD, residents in Tan Lap, Cam Tuyen commune, Cam Lo dist.).

Teachers also play an important role in passing on risk education to children. CRS has been one of the organizations working to train teachers and incorporate risk education into the school curriculum. *"Teachers are the primary recipients of the knowledge, which is then imparted directly to students, with both students and their parents being the ultimate beneficiaries of the project. Additionally, mine education for students in schools not only equips them with the knowledge and skills needed for personal safety but also contributes to the national program aimed at addressing the consequences of wartime mines and bombs. This initiative is an integral component of risk education"* (KII, Mine Action Program Manager, CRS).

Risk education is also starting to be delivered through digital platforms and text messages, including information about provincial MAC's hotline and encouragement to report UXO. Unfortunately, no feedback was obtained from villagers on how they experienced digital messages and information.



**Figure 4.6. Passing On Of Mine/UXO Risk Education Messages To Children**



**Figure 4.7. Passing On Of Mine/UXO Risk Education Messages To Other Household Members/Other People**

The majority of respondents reported that they only sometimes passed on messages about the dangers of mines and UXO to their children and other family members. This was similar in both Quang Tri and Quang Binh province. It appears that this might be because the UXO threat is not seen to be as immediate and life-threatening as it once was. Regarding safety concerns about UXO/mines, nearly 80% of survey respondents said that they would contact their village authorities when they had questions or concerns.

**Table 4.9. Information About Risk Education From Local Volunteers And Authorities**

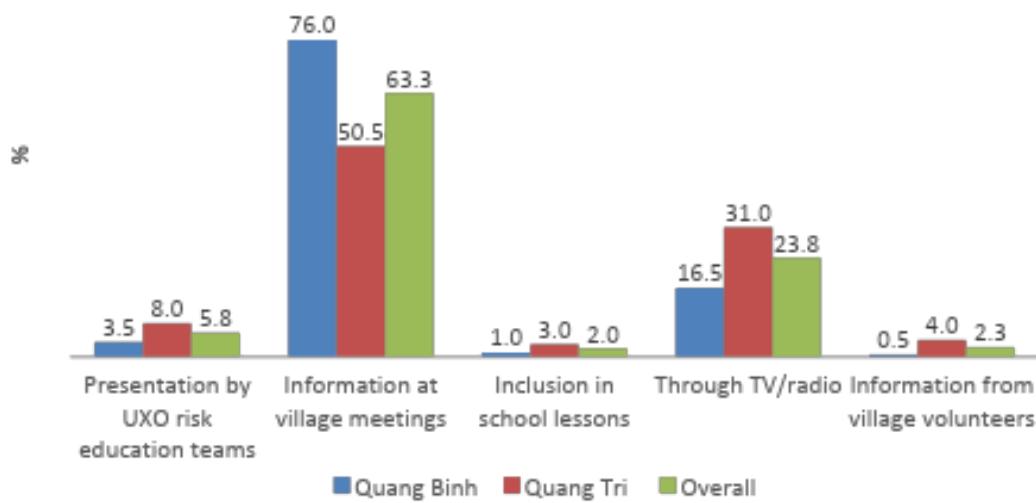
Indicators	Quang Binh % (n=200)	Quang Tri % (n=200)	Overall % (n=400)
Are there any local volunteers who provide information on UXO/mine risk education to other villagers			
Yes	1.5	20	11
No	68	66	67
<i>Do not know</i>	31	14	22
Who first, when have questions about UXO/mine safety			
<i>Village authorities</i>	84	75	80
<i>Village volunteer</i>	0	18	9
<i>UXO operators</i>	8	0.5	4
<i>Friend or relative</i>	8	7	8
Satisfaction level with the UXO/mine risk education			
<i>Very satisfied</i>	13	8	10
<i>Satisfied</i>	63	66	64
<i>Neutral</i>	25	26	26

Nearly 90% of respondents indicated that they either did not have or were unaware of any volunteers providing information on UXO risk education in their villages. Qualitative research findings also revealed that many villages did not have volunteers. As explained at a FGD in Quang Tri, "About 30 years ago, there were volunteers [who provided risk education] due to extensive mine clearance efforts. However, in the past decade, the situation has stabilized. Now, when we hear about mines, we report to the authorities who then handle the issue. If there are problems, our communication is coordinated with the authorities; otherwise, it is not addressed" (FGD, residents, Tan Lap village, Cam Tuyen commune, Cam Lo dist.). Similarly, another focus group in Quang Binh reported: "We have no volunteer team for mine prevention, only for fire safety. The community still needs assistance in clearing explosives, and we urge the government to focus on collecting all unexploded ordnance," (FGD, residents, Loc Thuong 1 village, An Thuy commune, Le Thuy dist.).

In Quang Tri, 18% of survey respondents said they would approach a village volunteer if they had a question or concern about mines or UXO. MAG, PTVN and CRS have established a network of risk education volunteers in Quang Tri, but not in Quang Binh. One risk education representative explained, "I work in both Quang Tri and Quang Binh. Currently, the mine action organization has completed the network of focal points in Quang Tri, leading to numerous activities and extensive data. In Quang Binh, we are still in the process of building the team" (FGD, UXO education, Quang Tri). Mine action operators also noted that local people may not be aware of "volunteers," as these volunteer networks may include youth union officials, village chiefs, schoolteachers or Red Cross officials.

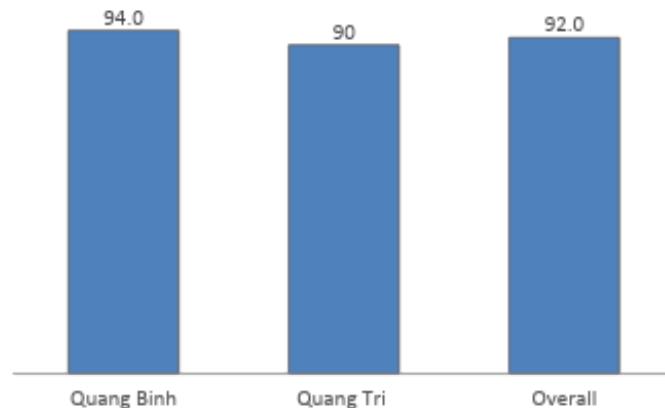
In recent years, despite a decrease in mine-related accidents, the district Red Cross Society (RCS) continues to train volunteers, focusing on accidents and injuries. As one representative of the RCS of Le Thuy district explained: "Volunteers, primarily teachers, receive training on UXO risk communication from the province, which they then convey to students" (KII, representative of RCS, Le Thuy dist.). Additionally, volunteers assist in survey activities and data collection for related projects. However, volunteers often lack support during their work. A representative from the Cam Lo dist. RCS noted: "Recently, Red Cross volunteers helped clear land for the Cam Lo district expressway. They helped, including cleaning houses and transporting furniture, without financial compensation" (KII, representative of RCS, Cam Lo dist.) Similarly, a representative from the Dong Ha City RCS commented: "Volunteers receive compensation only for specific activities like meetings and one-day training sessions, with no additional support provided" (KII, representative of RCS, Dong Ha city). This has impacted the frequency of community communication sessions, "Five years ago, when there were many UXO projects, risk communication activities conducted by volunteers occurred regularly on a monthly or quarterly basis and included home visits. In recent years, however, the reduction in UXO projects and the government's integration of mine victim programs with those for people with disabilities have led to a decrease in the number of community volunteers, with some villages having none at all. As a result, communication activities are now limited to occasional campaigns" (KII with representatives from DRCs, CPC, and FGD with UXO education staff in Quang Tri and Quang Binh).

**Figure 4.8. Effective methods for UXO/mine risk education for adults**



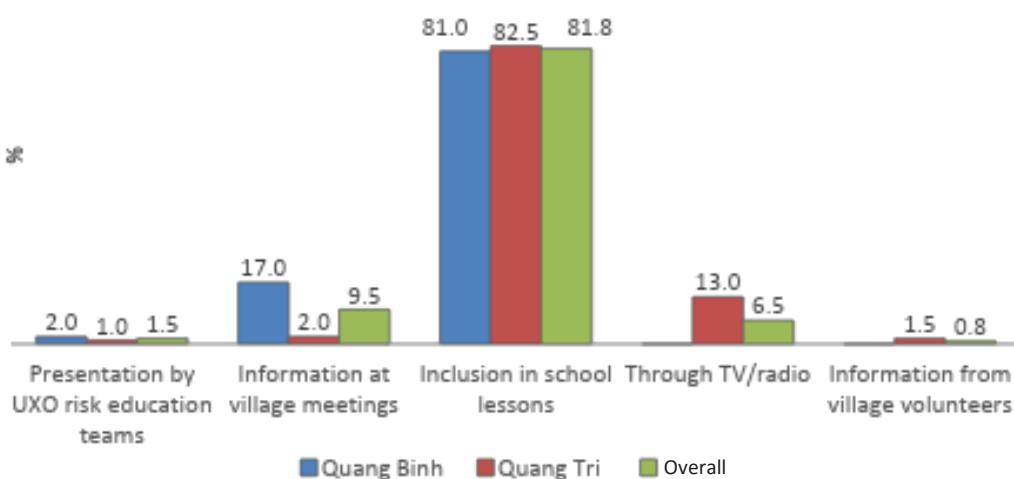
The two most effective communication channels for dissemination of UXO/mine risk education for adults in the community, according to the majority of respondents, were information provided at village meetings (63.3%) and broadcasts through TV or radio (23.8%). Although MAG has utilized digital platforms for UXO risk education, this method has limitations. As one of the recent advancements, digital platforms offer the advantage of reaching a wide audience quickly. For example, a MAG deminer reported that "MAG's brief [digital] campaign can reach nearly 2 million people in Quang Binh and Quang Tri provinces" (FGD, UXO deminers in Quang Tri).

However, this form of communication is one-way. As noted by a MAG representative, "*Because it is a social networking platform, it only facilitates one-way communication; MAG transmits information, but there is no mechanism for people to respond or provide feedback through MAG*" (KII, MAG representative in Quang Tri). This approach is more effective for younger audiences, which may explain why none of the survey participants, who were mostly middle-aged, consider it an effective communication method. Additionally, communication from the clearance team is often inadequate, "*After clearance, they only provide verbal reports and some brief notes before leaving*" (FGD, residents, Quang Tri & Quang Binh).



**Figure 4.9. Children Learn About Mine/UXO Risk Education At Schools**

Ninety-two percent of respondents reported that their children received education on UXO/ mines risks at school, with a higher rate observed in Quang Binh province compared to Quang Tri province (94% vs. 90%).



**Figure 4.10. Effective Methods For UXO/Mine Risk Education For Children**

Community members interviewed reported that the most effective communication channel for educating children about the risks of UXO/mines in the community was through integration into school lessons (around 82%). UXO/risk education is conducted on an ad-hoc basis when clearance teams are working in the vicinity of schools.

As villagers in a FGD commented, "*When clearance officers cleared areas near schools, they also educate students about the risks*" (FGD, residents, Tan Lap village, Cam Tuyen commune, Cam Lo dist.). In addition, risk education is also integrated into art performance programs or celebrations such as cultural days. "*UXO education content is integrated into cultural programs during festivals, such as Vietnamese Teachers' Day on November 20, as well*

as on special occasions like opening days and experiential lessons" (FGD, residents, Lo Thuong 2 village, An Thuy commune, Le Thuy dist.).

Risk education is integrated into the school curriculum in four provinces, supported by CRS. Schools organize communication sessions on mine/UXO risk with teachers, local government, and various departments participating: "The school organizes a communication session on the harm of mines, teachers are the communicators, the commune government, and other departments and organizations participate. Organize integrated communication in lessons for all 3 levels from primary, secondary and high school" (FGD, residents, Lo Thuong 2 village, An Thuy commune, Le Thuy dist.). In Quang Tri province, Project Renew also has an exhibition on mines and UXO which students can visit as part of their mine/UXO risk education activities. "Every year at primary and secondary schools, there are bomb and mine education activities, students get to visit the exhibition room about explosive materials at Project Renew office" (FGD, residents, Tam Hiep village, Cam Thuy commune, Cam Lo dist.)

## 4.4. VICTIM ASSISTANCE

Table 4.10. Information On UXO Victims

Indicators	Quang Binh (n=200)	Quang Tri (n=200)	Overall (n=400)
There are any victims of UXO/mine accidents in your village			
Yes	11	42	26
No	50	17	34
Do not know	40	42	41
Has your village/ community setup a fund or micro finance project for victims from UXO/Mines	(n=21)	(n=83)	(n=104)
No	100	98	99
Do not know	0	1.2	1
UXO/mine victims received any assistance or support from organizations or local authorities			
Yes	76	83	67
No	19	7	13
Do not know	5	10	20
You or other villagers support UXO/mine victims in other ways	29	41	39

Approximately 74% of respondents reported that there were either no mine victims in their village (34%) or they were unaware of any such victims (41%). Nearly all respondents (99%) indicated that there was no financial fund available for mine victims in their village. Most respondents (67%) stated that mine victims had received support from local organizations and authorities. Additionally, about 39% of respondents reported that their own households, as well as other households, had participated in supporting mine victims.

Table 4.11. Information On UXO Victim Assistance

Indicators	Quang Binh (n=16)	Quang Tri (n=69)	Overall (n=85)
Supported organizations or authorities			
<i>Village or commune authority</i>	0	65	53
<i>Provincial or district authorities</i>	13	33	29
<i>UXO organizations</i>	44	0	8
<i>Organizations supporting disability/UXO victims</i>	56	2	12
Kind of support is received			
<i>Money</i>	6	99	81
<i>Food and clothes</i>	6	9	8
<i>Support for transport</i>	13	0	2
<i>Support for medicine/treatment</i>	44	0	8
<i>Livelihood support (micro-credit, animal raising, seeds etc.)</i>	75	99	94
<i>Equipment (wheelchairs, ramps, prosthetics etc.)</i>	56	0	10
UXO/mine victims in this village get the support that they need			
<i>Yes, a little support</i>	38	89	79
<i>Not enough support</i>	57	11	20
<i>No support at all</i>	5	0	1

Over 80% of respondents reported that UXO victims received support from local authorities, approximately 12% respondents indicated that UXO victims received assistance from organizations dedicated to supporting people with disabilities and UXO victims, and about 8% of respondents said that UXO victims received aid from UXO organizations. The majority of respondents (94% and 81%) indicated that mine victims received livelihood support, such as micro-credit, animal husbandry, and seeds, as well as financial assistance. However, nearly 79% of respondents felt that this support addressed only a small portion of the victims' needs, and 20% believed it was insufficient.

Support for mine victims is often organized through the District Red Cross Societies. *"In cases of amputated limbs, the Red Cross Society coordinates with donors or mine action organization such as CRS, Project Renew, NPA to provide prosthetic limbs and additional support"* (KII, representative of Cam Lo District RCS). For physical care and rehabilitation, victims are provided with prosthetic limbs and some programs provide replacement prosthetics every few years: *"The Vietnam Association for Mine Action Support provides the replacement of prosthetic legs every three years, including accommodation and travel expenses for installation in Da Nang"* (KII, UXO victim in Hamlet 3, Ha Thiep village, Vo Ninh commune, Quang Ninh dist.) or *"Some programs also offer check-ups every 2-3 years to replace prosthetic legs due to wear and tear from frequent use"* (KII, UXO victim in An My village, Cam Tuyen commune, Cam Lo dist.).

Among eight victims interviewed two said that they had received free government health insurance. Nonetheless, some mine-affected individuals said that they had not received any support: *"The government did not aid at the time, and only villagers offered encouragement. To date, I have not received support from a disability support program and must purchase health insurance independently"* (KII, UXO victim in An My village, Cam Tuyen commune, Cam Lo dist.).

Regarding psychological support, only two out of eight victims reported being visited by local authorities for inquiries and encouragement. One victim shared, *"They sometimes encouraged us to attend training seminars to boost our self-confidence. Previously, due to my disability, I was hesitant to interact with friends and felt very self-conscious. However, after participating in these programs, I was able to be more open and engage with others, which helped me move forward in life"* (KII, UXO victim in An My village, Cam Tuyen commune, Cam Lo dist.)

Disability certificates are issued by the Commune People's Committee based on a disability assessment made by medical authorities. UXO victims with a disability certificate are able to receive monthly financial assistance based on the severity of the injury. For instance, one victim stated, *"Over the past 10 years, I have received 720,000 VND (\$29) per month due to a severe disability certificate"* (KII, UXO victim in Hamlet 1, Ha Thiep village, Vo Ninh commune, Quang Ninh dist.). Another reported receiving a state subsidy of 540,000 VND (\$22) per month for the past three to four years (KII, UXO victim, Tam Hiep village, Cam Thuy commune, Cam Lo dist.), while another noted that the support had increased from 120,000 VND to 540,000 VND (\$5 to \$22) per month over 15 years (KII, UXO victim in Hamlet 3, Ha Thiep village, Vo Ninh commune, Quang Ninh dist.)

Children of UXO victims receive tuition subsidies from mine action organizations. For example, one respondent indicated, *"My child receives 3.5 million VND (\$140) per semester from UXO clearance organizations in the district. This support has been provided since grade 10, and my child is now in the second year of university. I am unsure how long this support will continue"* (KII, UXO victim in Hamlet 1, Ha Thiep village, Vo Ninh commune, Quang Ninh dist.)

Some victims reported that they received loans to develop their livelihoods, for example, to purchase and raise livestock. *"When the Dutch program came, they offered me a loan of 5 million VND (\$200) because I am a bomb and mine victim and a disabled person. I used the loan to buy cows"* (PVS, bomb victim, An My village, Cam Tuyen commune, Cam Lo district, Quang Tri province). Another mentioned, *"Three years ago, the Bomb and Mine Association supported chicken farming by providing training, 60 chickens, and feed"* (KII, UXO victim in Hamlet 3, Ha Thiep village, Vo Ninh commune, Quang Ninh dist.).

Overall, mine victims expressed satisfaction with the support received: *"We are generally satisfied. Financial support helps us create more jobs and income"* (KII, UXO victim in Hamlet 3, Ha Thiep village, Vo Ninh commune, Quang Ninh dist.). However, some feel the support is insufficient: *"While I appreciate any assistance, the financial support for my child's tuition is inadequate. Since entering university, I have received 3.5 million VND (\$140) per semester, about 7 million VND (\$280) per year"* (KII, UXO victim in Hamlet 3, Ha Thiep village, Vo Ninh commune, Quang Ninh dist.). Another victim stated, *"The support serves more as encouragement than a reliable source of income. Although it motivates me to strive and stay positive, it is not sufficient"* (KII, UXO victim, Tam Hiep village, Cam Thuy commune, Cam Lo dist.).

Landmine victims have expressed a need for increased support, including loans for livestock farming: *"I need capital to start a business. It would be helpful if I could borrow 5-10 million VND (\$200-400) to purchase pigs, cows, chickens, and ducks to improve my income"* (KII, UXO victim in An My village, Cam Tuyen commune, Cam Lo district). They also seek reduced loan interest rates, noting, *"Borrowing money is challenging for disabled individuals due to difficulty paying interest. It is only manageable when we are able to work"* (UXO, Tam Hiep village, Cam Thuy commune, Cam Lo district). Additionally, there is a call for increased monthly support: *"1.1 million VND (\$44) per month is insufficient for my health and medication needs. I would like to see an increase in monthly support"* (KII, UXO victim, Ha Thiep 1 village, Vo Ninh commune, Quang Ninh district, Quang Binh province).

Victims also desire the establishment of a support club for people with disabilities to facilitate communication and mutual support: *"We need a club where people with disabilities can meet quarterly or annually to share experiences and provide support to each other. Currently, we are reluctant to attend village meetings and need a more dedicated space for open discussions"* (KII, UXO victim, Ha Thiep 3 village, Vo Ninh commune, Quang Ninh district, Quang Binh province). In addition, it is essential to revise the approach to enhance the sustainability of programs supporting mine victims. As one representative noted, *"Instead of merely supporting them to develop their traditional livelihoods, we aim to help them become economically independent by connecting victims with available local services. The goal is to ensure that when victims have a need, they know exactly where to go. Rather than having projects continuously search for victims and survey their needs, we want to establish a system where victims can directly access the resources they require. For instance, if they need vocational training, they should know which provider to contact or where to find programs tailored for people with disabilities. Similarly, if they need credit or prosthetic limbs, they should have clear guidance on where to seek assistance"* (KII, representative, NPA).

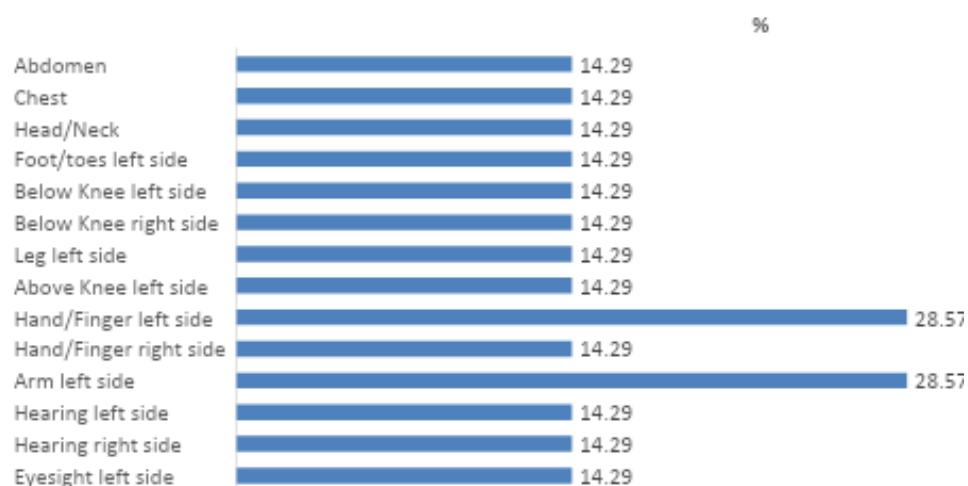
## 4.5. VICTIM INFORMATION

Table 4.12. General Information On UXO Victims

Indicators	(n=7) %
Relationship with household head	
<i>Household head</i>	71
<i>Father</i>	14
<i>Husband/wife</i>	14
Age of victim (mean $\pm$ SD, min-max)	56.1 $\pm$ 8.4 (42 - 70)
Male	86
Injured	100
Place of accident	
<i>In housed</i>	14
<i>In village</i>	29
<i>Riverbank</i>	14
<i>UXO clearance site</i>	14
<i>Forest</i>	29
Cause of accident	
<i>Making fire</i>	14
<i>Collection food wood</i>	14
<i>Farming / gardening</i>	29
<i>Digging</i>	43
Direction of accidents from village	
<i>South</i>	29
<i>West</i>	14
<i>North West</i>	57
Assistance received by the Victim (prothesis)	14

This survey included seven UXO victims with an average age of 56 years. Approximately 75% of UXO victims were household heads and 86% were male. All victims were married and had disabilities. The most common location of accidents included the village (29%) and on the edge of the forest (29%), with the primary causes of accidents digging and gardening. Only one out of the seven victims received support for prosthetics.

Table 4.11. Information On UXO Victim Assistance



All landmine and unexploded ordnance (UXO) victims experienced injuries to various parts of their bodies, including the eyes (left side), hearing (right side and left side), arms (left side), hands/fingers (right side and left side), above the knee (left side), legs (left side), below the knee (right side and left side), feet/toes (left side), head/neck, chest, and abdomen.

In-depth interviews with victims revealed that landmine accidents have had severe impacts on their health. For example, one victim reported: *"I lost one-third of my right leg and can no longer work"* (KII, UXO victim, Hamlet 3, Ha Thiep village, Vo Ninh commune, Quang Ninh dist.). Another victim stated: *"I had my left arm amputated, and sustained wounds to my left chest and head. My health has significantly deteriorated, and aging has further exacerbated these issues"* (KII, UXO victim, Hamlet 1, Ha Thiep village, Vo Ninh commune, Quang Ninh dist.). A third victim described: *"Fragments from a bomb explosion remain embedded in my head. At the time, I was too young to have them removed. Currently, my left arm is weak and paralyzed, and I have a traumatic brain injury, requiring daily medication"* (KII, UXO victim, Ha Thiep 1 village, Vo Ninh commune, Quang Ninh dist.). Another reported: *"I sustained injuries to my left forearm and abdomen. I had to undergo additional surgery years later due to intestinal adhesion"* (KII, UXO victim, An My village, Cam Tuyen commune, Cam Lo dist.).

These injuries significantly impact the livelihoods of the victims and their families. One victim noted: *"It is very challenging to manage daily tasks; I rely on my children to help with farming. With only one hand, I can only assist minimally"* (KII, UXO victim, Hamlet 3, Ha Thiep village, Vo Ninh commune, Quang Ninh dist.). Another added: *"I am unable to perform tasks on my left side and can only use my right side"* (KII, UXO victim, Hamlet 1, Ha Thiep village, Vo Ninh commune, Quang Ninh dist.)

## 4.6. IMPACT OF MINE ACTION PROGRAMS

### 4.6.1. CHANGES IN INTERVENTION PROGRAMS

Mine action programs have significantly contributed to the well-being of victims, their families, and the broader community through several key outcomes: (i) the development of livelihoods, reduction of hunger, and alleviation of poverty; (ii) improvement of the production environment; and (iii) transformation of community knowledge, attitudes, and practices related to mines and unexploded ordnance (UXO).

Mine action initiatives have created some employment opportunities for local people. The Quang Tri MAC reported that, *"There are more than 1,000 individuals engaged in mine action activities in Quang Tri province."* Several mine action organizations have hired a significant number of local staff in Quang Tri and Quang Binh. For instance, Project Renew employed and created job opportunities for local people as deminers. Similarly, MAG has appointed three focal points in each commune to support survey and mine clearance activities. According to UXO deminers in Quang Tri, *"In each commune, MAG has recruited three focal points to deploy survey and mine clearance activities"* (FGD, UXO deminers in Quang Tri).

Local staff involved in mine action activities expressed pride at being involved in these activities. One Project Renew staff member shared, *"As a member of Project Renew, I have helped my local residents clear and clean up dozens of hectares of UXO-contaminated land over the past 10 years. This work is very meaningful and brings me great happiness"* (KII, local clearance staff in Quang Binh and Quang Tri). Another local education staff member added, *"Being able to connect and communicate with people in my local villages makes my work very meaningful because it helps people understand and prevent the risks that lead to mine accidents"* (KII, local education staff in Quang Binh and Quang Tri). A respondent in Quang Tri reported that the availability of jobs and income has enhanced local consumption and trading activities, thereby contributing to growth and overall provincial development.

Reducing mine accidents has also improved safety and alleviated economic hardships for families: *"When an accident occurs, it incurs medical expenses and causes both mental and physical issues for the victim. Family members may also need to take time off work to provide care. Therefore, reducing mine accidents supports economic development and poverty reduction"* (KII, representative of Project Renew in Quang Tri). Furthermore, people received support for agricultural inputs to help ensure their livelihoods *"The mine action organizations support livelihoods through programs that provide livestock such as cows and agricultural tools such as motorboats"* (KII, representative of the RCS of Dong Ha city).

The clearance of land has enabled residents to confidently engage in agriculture: “Once the land is cleared and declared safe by the government and relevant organizations, people feel secure in raising livestock, growing crops, and advancing their economic activities” (FGD, residents of Loc Thuong 2 village, An Thuy commune, Le dist.). One resident noted, “Before clearance, people did not cultivate the land because it was too narrow. After clearance, the land area increased, which encouraged people to engage more actively in cultivation” (FGD, residents, Tan Loc village, Cam Tuyen commune, Cam Lo district). Another resident observed, “Before clearance, people rarely worked the land for planting. After clearance, they confidently used machinery to plow and harrow” (FGD, residents of Loc Thuong 1 village, An Thuy commune, Le Thuy district). The cleared land has also facilitated the construction of schools and resettlement villages, further contributing to a good social environment for local residents “Following clearance, new schools and resettlement areas have emerged” (KII, representative of the Quang Tri MAC), developments that are reported to have a positive impact on local socio-economic development.

In terms of community knowledge, attitudes, and practices, there has been a notable increase in awareness. Previously, residents were hesitant to engage in agricultural activities on cleared land due to safety concerns. However, with improved awareness, “People are now more confident to engage in planting seedlings, short-term crops, and perennial crops, thereby boosting their family economies and investment activities” (KII, representative of Cam Lo district RCS). Earlier, many individuals attempted to clear mines and UXO themselves for economic gain, but increased awareness and education have changed their practices: “Previously, some families made a living by clearing mines and bombs themselves, but after witnessing the consequences, they ceased this activity and advised others against it” (KII, representative of Dong Ha City RCS). Risk education staff noted that when people had previously encountered UXO in their fields, they would often dig it up and take it home. However, due to the awareness campaigns, more people are reporting UXO finds to the local authorities.

Post-clearance, residents report increased safety and confidence in their daily activities and production: “Before mine clearance, there was significant fear, even during basic tasks like digging. Now, people feel more secure in their work and daily lives” (FGD, Tam Hiep village, Cam Thuy commune, Cam Lo dist.); “Mine clearance has significantly improved our sense of security in work and production” (FGD, residents, Loc Thuong 2 village, An Thuy commune, Le Thuy dist.).

## 4.6.2. FACTORS THAT HELP INTERVENTION PROGRAMS ACHIEVE EFFECTIVENESS

Several factors have contributed to the effectiveness of intervention programs: (i) clear priorities set by mine action organizations; (ii) alignment with community needs; and (iii) active community participation in planning and implementation.

Regarding priorities established by mine action organizations, CRS emphasizes mine risk education, particularly targeting children, a high-risk group: “Mine risk education remains crucial for raising awareness, especially among high-risk groups such as children and residents in remote areas. The demand for these activities remains significant” (KII, Mine Action Program Manager, CRS).

Peace Trees Quang Tri prioritizes mine clearance to facilitate land use and ensure public safety: “With current investment levels, it is estimated that clearing all contaminated areas will take another 10 years. The reduction in mine accidents over the past decade is largely attributable to increased public awareness from mine communication efforts” (KII, representative of PTVN in Quang Tri). Risk communication and education are also highlighted as critical priorities: “Direct and indirect communication methods are essential. While there is some effective communication, public curiosity remains low. Media should incorporate visual aids such as pictures and videos” (KII, representative of Le Thuy District RCS); “The primary focus is on risk education and communication” (KII, representative of Tan Lap village, Cam Tuyen commune, Cam Lo dist.); “Effective communication involves providing detailed instructions on preventive measures and emergency reporting through media” (KII, representative of Ha Thiep village, Vo Ninh commune, Quang Ninh dist.).

While prioritization of areas for clearance are largely decided at a national and provincial level, some organizations are involving local communities and authorities through risk mapping activities and local consultation workshops. Through this method, NPA and Project Renew in Quang Tri have identified 619.5 km<sup>2</sup> of confirmed hazardous areas within the province which are prioritized for clearance (KII, representative of NPA in Quang Tri). Additionally, organizations integrate clearance activities with educational efforts about the dangers of mines and UXO: “The project combines mine clearance with educational programs for students and the public about the dangers of

*mines and bombs, alongside support for mine victims*" (KII, representative of Project Renew in Quang Tri); "We meet about 70% of the educational requirements. We aim to enhance engagement through competitions, quizzes, and skits" (KII, representative of Vo Ninh commune, Quang Ninh district).

Community involvement in clearance of UXO primarily involves reporting UXO finds to mine action organizations and the local authorities. "The community's role is mainly in coordinating with units to report mines and UXO. Prioritization is not conducted by the community, but they assist in assessing priorities and planning" (KII, representative of Quang Binh DBCU). Peace Trees also emphasized community consultation in the planning process: "Priority determination involves consultation and participation from the community and beneficiaries to accurately redefine priorities" (KII, representative of PTVN in Quang Tri). Specially, the participation of the military and police is also critical "The involvement of police and soldiers is essential, to ensure non-governmental projects conducting activities do not face any procedural or legal challenges" (KII, representative of MAG in Quang Tri).

#### **4.6.3. OPPORTUNITIES AND CHALLENGES OF MINE ACTION PROGRAMS**

Mine action programs benefit from substantial support from international organizations: "programs funded by the US Government, particularly the US Department of State, are committed to completing clearance work in Quang Tri province" (KII, representative of Quang Tri MAC). The application of innovative clearance methods by organizations such as Peace Trees has yielded better results: "Various methods are being tested, including the use of dogs and rats for detection, as well as advanced machinery" (KII, representative of PTVN in Quang Tri). MAG and NPA are also experimenting with machines and equipment to speed up clearance activities: "These projects include researching unmanned aerial systems equipped with scanning technology for specific areas. Globally, mine action units are seeking technical solutions to expedite clearance activities" (KII, representative of MAG and NPA in Quang Tri).

Improved methods for mine/UXO destruction have also minimized environmental impact. In Quang Tri province, the cutting method is now applied to large bombs, reducing the need for large quantities of explosives and sandbags, and minimizing the explosion area. A representative of the Quang Tri MAC explained "This method is particularly beneficial as available training grounds are becoming increasingly limited due to land use demands" (KII, representative of Quang Tri MAC). Furthermore, UXO clearance programs are collaborating with the US Department of Defense to research chemical methods for destroying UXO: "Efforts are underway to develop chemicals that can neutralize bombs and bullets without the need for traditional destruction methods" (KII, representative of the Quang Tri Province Mine Action Center). However, the program continues to face significant challenges, particularly in detecting UXO buried deep underground "Despite the war having ended long ago, explosives are still being discovered during construction activities" (KII, representative of the Cam Lo District RCS). Applying new clearance methods on cultivated land also presents difficulties: "These machines are designed to operate on bare land, making it challenging to scan areas that are still being farmed" (KII, representative of the PTVN in Quang Tri). Additionally, some destruction methods used in other countries are not compliant with Vietnamese law: "For example, in Cambodia, residual explosives from cut bombs are repurposed for destruction, whereas in Vietnam, all explosives must be incinerated" (KII, representative of PTVN in Quang Tri). Changes in funding sources pose another challenge for mine action programs: "While the US Government currently supports these initiatives, future policy shifts could impact funding availability" (KII, representative of Quang Tri MAC and Quang Binh DBCU).

Some households where UXO clearance was conducted mentioned that some crops had been damaged during the clearance process, although villagers also noted that they felt it was a sacrifice worth making. "Although the crops were damaged, for safety reasons, I prioritized the clearance team" (FGD, residents, Tam Hiep village, Cam Thuy commune, Cam Lo district, and Loc Thuong 2 village, An Thuy commune, Le Thuy district).

Working in areas with ethnic minority peoples, such as in Huong Hoa district in Quang Tri, also requires mine action organizations to work sensitively. Programs noted that language and cultural differences are sometimes a challenge, with people often absent from villages during the day, or shy to interact with outsiders. As one mine action representative noted, "ethnic minority households often go to the forest, making it challenging to mobilize them for project activities" (KII, representatives from Project Renew, NPA, MAC, PTVN) and "when engaging with ethnic minority communities, the presence of a village chief is crucial as people tend to be shy around outsiders" (KII, representatives from district DRCs and mine action organizations). It is also crucial to clearly identify target audiences and assess community vulnerabilities during the planning process "Coordination with relevant departments is essential, whether working with schools or communities" (KII, representative of Le Thuy District RCS).

## 4.7. ROLES AND RESPONSIBILITIES RELATED TO UXO AT ALL LEVELS

### 4.7.1. VNMAC

VNMAC, overseen by the Ministry of National Defense, is responsible for advising the Government and the Ministry of National Defense, and for directing the National Action Program to address the consequences of post-war mines in Vietnam.

Key tasks of VNMAC include:

- **Policy Development:** Researching and proposing policies, as well as developing long-term, medium-term, and short-term plans to address the consequences of post-war mines in Vietnam.
- **Plan Implementation:** Executing the National Action Plan to address post-war mine consequences.
- **Legal Documentation:** Drafting and submitting legal and military administrative documents related to mine action for approval by competent authorities.
- **International and National Cooperation:** Facilitating international collaboration and mobilizing national resources for mine action efforts.
- **Capacity Building:** Enhancing the capabilities of personnel involved in mine action; advising the Prime Minister on priorities; coordinating mine clearance projects, victim support initiatives, and mine accident prevention education.
- **Database Management:** Establishing and managing a comprehensive database on post-war mine and bomb remediation; developing standards and regulations; overseeing the monitoring, quality control, and evaluation of the National Action Program's implementation.
- **Coordination:** Guiding and coordinating the activities of domestic and international organizations and individuals involved in mine action.
- **Program Management:** Managing, sustaining, and advancing the National Action Program on mine and bomb consequences.
- **Reporting and Accountability:** Providing interim and final reports on program results; recommending rewards or disciplinary actions for organizations and individuals involved in mine action.

### 4.7.2. INGOs

CRS primarily focuses on mine risk education in schools, targeting teachers and students. The organization emphasizes educating primary and secondary school students about mine risks, although its victim support program has been inactive since 2016. CRS currently implements three programs across 12 provinces and cities in the Central and Southern regions: (i) Mine Action Program, (ii) Disability Reintegration Support Program, and (iii) Natural Disaster Risk Reduction and Climate Change Adaptation Program (KII, Mine Action Program Manager, CRS). The MAG Quang Tri Humanitarian Action Organization mainly concentrates on the clearance of mines and unexploded ordnance (UXO), with a smaller focus on UXO risk education: "Initially supported by a communication team, MAG now operates with three teams of two members each, collaborating with other organizations involved in mine clearance. Community communication activities include pre- and post-clearance assessments, non-technical site surveys in preparation for clearance, and mine and bomb prevention propaganda" (KII, MAG in Quang Tri).

Peace Trees Vietnam (PTVN) is dedicated to ensuring community safety and development in Quang Binh and Quang Tri: "PTVN's work encompasses five areas, including mine clearance and mine awareness education. In addition to these core activities, PTVN supports community development post-clearance and engages in people-to-people diplomacy programs, which interact with and support each other" (KII, representative of PTVN in Quang Tri). Clearance officers from Peace Trees Quang Binh are responsible for: (1) Supervising mine accident prevention during clearance operations, (2) Directly conducting clearance activities, (3) Surveying and evaluating the site post-clearance, and (4) Providing education on accident and injury prevention. During operations, officers also engage in on-site awareness activities to educate local communities about the dangers of unexploded ordnance and prevention measures (FGD, PTVN UXO clearance staff in Quang Tri).

Project Renew addresses the consequences of mines and bombs through clearance, survey, victim support, and educational outreach about the harmful effects of UXO/ mines: "Project Renew collaborates with the Quang Tri Provincial Committee to develop a comprehensive model, with different sponsors for each program component, such as NPA for clearance activities and the Irish government for victim support" (KII, representative, Project Renew in Quang Tri).

The NPA in Quang Tri is responsible for managing, arranging, and organizing mine action teams in Quang Tri province to ensure effective and compliant operations (KII, representative of NPA in Quang Tri).

### 4.7.3. PROVINCIAL MINE ACTION CENTERS

The QTMAC is responsible for collecting and managing data related to mine action, including survey, clearance, communication, and victim support activities. The Center oversees several departments: "The Operations Department, which coordinates survey and clearance activities on-site; the Database Department, which manages and shares information from various projects; and the Office Department, which provides general administrative support" (KII, representative of Quang Tri MAC).

The DBCU is tasked with developing action plans, monitoring, and enhancing the management of information and operations within the mine action field. The unit is responsible for organizing coordination and technical meetings, conducting quality control assessments to ensure the effectiveness of project activities, and preparing quarterly and annual reports "The primary objective of the DBCU project is to establish and implement a comprehensive mine information management system for the province. My role involves contributing to this project by managing project data, synthesizing information, and coordinating efforts across all mine action organizations in the province" (KII, representative of DBCU).

### 4.7.4. DISTRICT LEVEL

KIIs revealed that the district Red Cross Society has actively engaged in humanitarian efforts related to mines and unexploded ordnance (UXO). This includes disseminating information about the risks associated with these hazards: "We focus on propagating and spreading policies related to post-war risk support, aiming to enhance public awareness about the prevention of the harmful effects of mines and UXO" (KII, representative of Dong Ha City RCS). Additionally, the Society has mobilized support for prosthetic limbs and livelihood development for victims. "In 2016, projects were implemented to support livelihood development for bomb and mine victims, providing assistance such as livestock for raising" (KII, representative of Cam Lo District RCS).

### 4.7.5. COMMUNE AND VILLAGE AUTHORITIES

Interviews with officials across various levels revealed that commune and village authorities are actively engaged in mine action programs. Their roles include reporting newly discovered mine areas to clearance teams and higher authorities. For example, a village chief may report mine discoveries directly to the commune level to initiate a survey by the clearance team: "Upon receiving information from residents about mine locations, the village chief reports directly to the commune authorities, who then notify the clearance team to conduct a survey" (KII, representative of Loc Thuong village, An Thuy commune, Le Thuy district). Additionally, these authorities play a crucial role in mobilizing community participation for risk education and communication programs: "The village chief frequently encourages community members to attend events aimed at raising awareness about mine risks" (KII, representative of Tan Lap village, Cam Tuyen commune, Cam Lo district). Furthermore, commune and village authorities also work to mobilize social resources to assist mine victims, particularly those in challenging situations: "The commune and village authorities have organized resources to support households affected by mine accidents and facing economic difficulties" (KII, representative of the Com Lo District RCS).

# CHAPTER 5: CONCLUSION AND RECOMMENDATION

## 5.1. CONCLUSION

Regarding community participation in UXO clearance, a significant proportion of households were unaware of UXO contamination on their land (44%) or community land (71%). Among those aware, 60% had contacted organizations for UXO clearance on their property. Post-clearance, 100% of these households expressed satisfaction with the process, and 90% reported utilizing the cleared land. While 70% of households actively engaged in reporting and clearing UXO on their land, fewer households (35%) knew about UXO clearance activities on community land, and most documents indicate that local authorities have never requested UXO clearance on public land.

In terms of risk education, 85% of individuals reported receiving risk communication messages in the past five years. The predominant risk communication methods included messages broadcasted via radio or TV (87%) and village meetings (58%). Most participants (82%) found these messages clear, and they believed that the communication improved their understanding of UXO/mines (91%) and their identification (69%). For adults, the most effective communication channel was village meetings (63%). For children, 92% had received UXO risk education at school, with the integration of risk education into school lessons being the most effective method (82%). However, communication frequency was infrequent, with 51% of households receiving messages only once in the past five years. Additionally, the regular dissemination of risk education was low, with 24% of households frequently communicating with children and 14% regularly engaging with household members and their community. Volunteer-led propaganda activities have declined, particularly in Quang Binh, where some villages now lack volunteers, thereby diminishing the effectiveness of risk education programs.

Landmines and explosives have caused various injuries, including to hands, feet, head, and chest, among other health issues. In terms of victim support, over 80% of interviewees reported that landmine/explosive victims received government assistance, mainly in the form of livelihood support (e.g. micro-credit, animal rearing, seeds) and monetary aid. However, such support was only partially adequate (79%) and often insufficient (20.4%) for addressing the needs of mine/UXO victims.

Mine action programs have contributed to developing livelihoods, alleviating hunger, reducing poverty, improving the production environment, and changing community knowledge, attitudes, and practices regarding mines and UXO.

Effective intervention factors include clear priorities from mine action organizations, meeting community needs, and involving community participation in planning and implementation.

Opportunities for these programs include international support and the application of new clearance methods, which have yielded better results and reduced environmental impacts. Nevertheless, challenges persist, particularly in detecting UXO buried deep underground and applying new clearance methods on cultivated land, while some destruction methods remain non-compliant with Vietnamese regulations.

## 5.2. RECOMMENDATION

Based on the survey results, the following recommendations are proposed:

### 1. For local mine action organizations:

- Continue to promote and expand UXO reporting activities via hotlines, especially in Quang Binh province.
- Strengthen communication efforts before and after clearance on household land to ensure that households are well-informed.

### 2. For local mine action organizations:

- Prioritize economic development and livelihood support for households with UXO victims in contaminated areas.
- Implement two-way UXO education and communication in the community and increase the frequency and reach, such as through group communication sessions and household visits.
- Support government organizations and local authorities in enhancing the capacity of local UXO volunteers.

### 3. For local authorities:

- Increase community participation in the process of requesting survey and clearance of community land.
- Mobilize community involvement in supporting livelihoods for UXO victims, such as through preferential loans and agricultural input support for livelihood development.
- Coordinate efforts between the district/city Red Cross, local authorities, and international mine action organizations to promote volunteer activities in mine-contaminated areas

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## PHOTOS OF FIELD SURVEY

 A group of people are seated around a long, dark wooden conference table in a room with a green wall. On the wall behind them is a large map of a region. One person is standing and speaking to the group, who are all looking towards them. A whiteboard is visible in the background.	 A group of people are seated around a simple wooden table in a room with green walls. A window is visible in the background. The people are engaged in a discussion, with one person using a laptop. There are various items on the table, including a yellow container and some glasses.
FGD with NPA clearance team in Dong Ha city, Quang Tri province	FGD with local residents in Loc Thuong 1 village, An Thuy commune, Le Thuy dist., Quang Binh province
 A group of people are seated around a small red table outdoors. They are engaged in a discussion. The setting appears to be a simple outdoor area with a bamboo fence in the background.	 A group of people are seated around a wooden conference table in an office setting. There are glass-fronted cabinets in the background. The people are engaged in a discussion, with one person speaking and others listening attentively.
FGD with local residents in Tam Hiep village, Cam Thuy commune, Cam Lo district, Quang Tri province	KII with representatives of Cam Lo DRC, Quang Tri province



Data collecton in Duc Thuy villageg, Duc Ninh commune, Quang Binh, Quang Binh

In depth interview with village leader In Tan Lap village, Cam Tuyen commune, Cam Lo dist., Quang Tri province



Data collection in Gia Ninh commune, Quang Ninh dist., Quang Binh province



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