

ARTICLE 5 DEADLINE: 31 OCTOBER 2023
NOT ON TRACK TO MEET DEADLINE

KEY DATA

ANTI-PERSONNEL (AP)
MINE CONTAMINATION:

HEAVY, OVER 20 KM²
(MINE ACTION REVIEW ESTIMATE)

AP MINE
CLEARANCE IN 2019

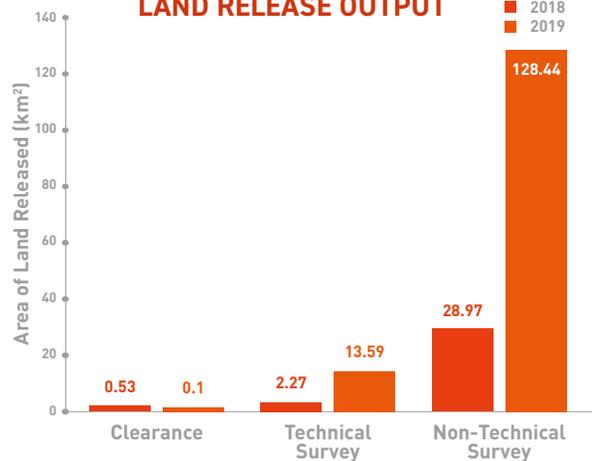
0.1 KM²

AP MINES
DESTROYED IN 2019

2,713

(INCLUDING 36 DESTROYED
IN SPOT TASKS)

LAND RELEASE OUTPUT



CURRENT LIKELIHOOD OF MEETING 2025 CLEARANCE TARGET (as per the Oslo Action Plan commitment): **MEDIUM**

KEY DEVELOPMENTS

Thailand's mine action programme continued to improve during 2019, with publication of a "Five-Year Humanitarian Mine Action Plan, 1 November 2018–31 October 2023" in April 2019, containing ambitious annual targets. The Thailand Mine Action Center (TMAC) reported significant land release output for 2019. The effort was underpinned by an online information management system that became fully operational during the year and by effective coordination between TMAC and its implementing partners.

TMAC exceeded its land release target for 2019 by more than 21 km², mostly as a result of non-technical survey in the first phase (2019–20) of its Five-Year plan. It was uncertain whether all areas identified for resurvey, and in particular those in areas with unclear border demarcation along the Thailand-Cambodia border, would be accessible in 2020.

RECOMMENDATIONS FOR ACTION

- Thailand should ensure that the pilot border clearance project with Cambodia runs to schedule and should seek to conclude a bilateral cooperation mechanism that would enable both countries to survey and clear all mined areas along the shared border.
- TMAC should develop suitable national mine action standards and standing operating procedures (SOPs) for the use of mine detection dogs (MDDs)/animal detection systems (ADS) and for the use of mechanical assets.
- Thailand should elaborate a gender policy and supporting implementation plan for mine action.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2019)	Score (2018)	Performance Commentary
UNDERSTANDING OF CONTAMINATION (20% of overall score)	7	7	Thailand has been conducting non-technical survey on all suspected hazardous areas (SHAs), which was due to conclude in 2020, though the end date may be delayed due to the impact of COVID-19 on operations.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	7	7	There is strong national ownership of Thailand's mine action programme, with armed forces personnel conducting survey and clearance operations, supported by and in good collaboration with non-governmental clearance organisations.
GENDER AND DIVERSITY (10% of overall score)	5	4	The overall proportion of women at TMAC increased in 2019 compared to the previous year, and four senior positions are now filled by women. However, most female personnel at TMAC are employed in administrative roles and military regulations prevent women working in the demining teams. However, this policy does not apply to civilian operators. Thailand's ongoing baseline survey is based on inclusive community interviews in all areas where the survey is conducted, during which women, girls, boys and men are consulted. In areas where minority groups reside, they are also consulted.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	7	7	The Arc Geographic Information System (GIS) online information management system, introduced in 2018, became fully operational in 2019, allowing demining units to submit information online and enabling TMAC to verify data and make corrections.
PLANNING AND TASKING (10% of overall score)	8	8	In April 2019, Thailand published a five-year strategic mine action plan through to the end of October 2023, containing annual targets and detailing prioritisation for the release of mined areas. TMAC exceeded its planned land release target for 2019, releasing more than 142km ² , primarily through non-technical survey.
LAND RELEASE SYSTEM (20% of overall score)	8	8	TMAC is applying efficient land release methodology, conducting non-technical survey to cancel a significant amount of the overestimated SHA in its database and to determine more accurately the location of mine contamination.
LAND RELEASE OUTPUTS AND ARTICLE 5 COMPLIANCE (20% of overall score)	7	7	Land release output in 2019 exceeded that in 2018, due to the focus on non-technical survey. TMAC has been achieving the annual land release targets largely through non-technical survey. Technical survey and clearance targets for phase two of its plan (2021-23) are very ambitious and will require sustained funding, extra capacity, and successful coordination with Cambodia to address all mined areas along the border, including those in areas with unclear border demarcation.
Average Score	7.1	7.0	Overall Programme Performance: GOOD

DEMINEING CAPACITY

MANAGEMENT CAPACITY

- National Committee for Humanitarian Mine Action (NMAC)
- Thailand Mine Action Centre (TMAC)

NATIONAL OPERATORS

- Humanitarian Mine Action Units (HMAU 1-4) and HMAU TMAC
- Thai Civilian Deminer Association (TDA)

INTERNATIONAL OPERATORS

- Norwegian People's Aid (NPA)

OTHER ACTORS

- Golden West Humanitarian Foundation (Golden West)

UNDERSTANDING OF AP MINE CONTAMINATION

As at 31 October 2019 (the end of Thailand's fiscal year), Thailand estimated that it had over 218km² of mined area remaining over 254 hazardous areas in 9 provinces (see Table 1 below).¹ This was a reduction of 142km² from the 360km² of mined area in 2018.²

Contamination as at the end of October 2019 consisted of 82 confirmed hazardous areas (CHAs) totalling over 14.5km² and 172 suspected hazardous areas (SHAs) totalling over 203.6km².³ In 2019, over 0.32km² of additional mined area was identified and confirmed in Sa Kaeo, Trat, Chanthaburi, and Buri Ram provinces.⁴

Table 1: Anti-personnel mined area by province (at end-October 2019)⁵

Region	Province	CHAs	Area (m ²)	SHAs	Area (m ²)	Total area (m ²)
North	Phitsanulok	0	0	1	25,263,004	25,263,004
North-East	Ubon Ratchathani	14	4,109,965	44	76,751,085	80,861,050
	Si Sa ket	19	2,267,521	21	24,013,551	26,281,072
	Surin	0	0	26	27,299,749	27,299,749
	Buri-Ram	14	1,119,179	1	1,838,511	2,957,690
East	Sa Kaeo	5	326,000	15	6,440,538	6,766,538
	Chanthaburi	2	17,750	10	3,508,622	3,526,372
	Trat	25	6,660,719	54	38,529,552	45,190,271
South	Chumphon	3	48,499	0	0	48,499
Totals		82	14,549,633	172	203,644,612	218,194,245

Since 2016, TMAC and Norwegian People's Aid (NPA) have been working on a pilot project resurveying the vastly overestimated SHA. Taking into account the results of the pilot project, TMAC has forecasted that up to 80% of existing SHAs can be cancelled or at least significantly reduced in size through survey.⁶

In its "Five-Year Humanitarian Mine Action Plan, 1 November 2018–31 October 2023" (hereafter, Five-Year Plan), published in April 2019, Thailand projected that of the outstanding 360km² of contamination, 269km² will be cancelled through non-technical survey and nearly 91km² of CHA will remain for technical survey and clearance.⁷ TMAC is therefore focusing its efforts in 2019–20 on cancelling land through non-technical survey before moving on to technical survey and full clearance in 2021–23.⁸

NPA estimates that ongoing non-technical survey will result in an even smaller area (approximately 20km²) requiring clearance. But NPA also foresees a need for further non-technical survey and updating of survey data during reduction and clearance operations as more information becomes available.⁹

The baseline non-technical survey project was expected to be completed by October 2020.¹⁰ Furthermore, most of the mined areas are located along the Thai-Cambodia border¹¹ and it is uncertain whether all areas identified for resurvey will be accessible in 2020 due to the unclear border demarcation in many areas along the Thailand and Cambodia border. This is likely to further delay the completion of resurvey.¹²

Thailand is affected by mines as well as by explosive remnants of war (ERW), the result of conflicts on its borders with Cambodia, the Lao People's Democratic Republic (Lao PDR), Malaysia, and Myanmar. The majority of remaining contamination is in seven eastern and north-eastern provinces bordering Cambodia, with the rest in Chiang Mai and Chumphon, bordering Myanmar, and in Pitsanuloke, on the border with Lao PDR.¹³

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Thailand created the National Committee for Humanitarian Mine Action (NMAC) in 2000, chaired by the prime minister and with responsibility for overseeing the national mine action programme. Since 2008, NMAC did not convene until it was reconstituted in May 2017, again with the prime minister as chairman. The engagement of national leadership in the Committee was seen as important in facilitating policy direction and progress on issues affecting national security, notably regarding cooperation with neighbouring countries on clearing border areas.¹⁴

NMAC is currently tasked with creating policy guidance and mobilising resources from all sectors to support mine action to be able to complete clearance in the allotted timeframe.¹⁵ In reality, however, NMAC has no operational or strategic power and is purely procedural.¹⁶

TMAC was established in 1999 under the Royal Thai Armed Forces Headquarters to coordinate, monitor, and conduct mine/ERW survey and clearance, risk education, and victim assistance throughout Thailand.¹⁷ While the roles and responsibilities within the sector are clear and coherent TMAC has had to contend with limited funding and, as a military organisation, with regular rotation of personnel at all levels.¹⁸ Lieutenant-General Sittipol Nimnuan took over as TMAC's director in October 2017, the eleventh director since TMAC was created in 2000 and the seventh in the last nine years. In order to maintain continuity, TMAC has made a request with the Royal Thai Armed Forces Headquarters that personnel working within TMAC remain in post for at least two years rather than be rotated out on an annual basis. General Sittipol's directorship since 2017 has brought continuity to TMAC and improved its effectiveness. TMAC also requested that personnel working in the Humanitarian Mine Action Units (HMAUs) either have the required training and qualifications before they assume the role or that personnel remain in post for no less than two years. TMAC aims to have a 60:40 ratio of old personnel to new for the purposes of continuity and to retain knowledge.¹⁹ Classes taught by US Marine Corps Forces, Pacific (US MARFORPAC) help TMAC to train newly assigned personnel, as well as providing mentorship to operational and staff personnel who can remain at TMAC for several years.²⁰

While the roles and responsibilities within TMAC are clear and coherent there have been some challenges with the command structure of the HMAUs. With the exception of one of the HMAUs, HTMAC, personnel come from the Division-Level Force of the Royal Thai Army and the Royal Thai Navy, which means they must report both to TMAC and to their respective divisional command.²¹ TMAC has worked to educate the HMAUs, high-ranking generals, and the Chief of Defence Forces on the importance of mine action.²²

The cost of TMAC (including personnel, equipment, operational costs, meetings, workshops, and trainings), is covered by the Thai government, through the Royal Thai Armed Forces Headquarters. Survey and clearance costs of the HMAUs are also nationally funded.²³ In 2018, TMAC received a budget of about THB70 million a year (approx.

US\$2.1 million), much lower than the THB177 million (approx. US\$5.8 million) budgeted in Thailand's 2017 Article 5 deadline extension request.²⁴ In 2019, TMAC's budget was greatly increased to THB248 million (approx. \$7.5 million).²⁵ TMAC is also seeking additional funds to procure new equipment and repair of existing equipment, amounting to THB23 million (approx. \$746,000) through to 2022.²⁶ Thailand indicated in its Five-Year Plan, and at the Fourth Review Conference in November 2019, that it would welcome international assistance for capacity building and equipment (especially to facilitate access areas with rough and challenging terrain).²⁷

TMAC is reported to be very supportive of NPA. Staff from HMAU-2 and HMAU-3 are seconded to NPA and the regional military command in HMAU-3 provided support to NPA to ensure quick and efficient introduction of MDDs and their handlers from Cambodia to Thailand, as well as providing free and secure training areas for the MDDs and access to explosives/landmines for training purposes. TMAC also provides NPA with space at its office free of charge.²⁸ That said, strict regulations on who can handle explosives in Thailand, along with restrictive rules on most demining equipment which define it as military equipment, hampers the ability of civilian entities to conduct explosive ordnance disposal (EOD)/clearance.²⁹

While Thailand has not yet created a formal in-country platform, such as a National Mine Action Platform (NMAP), regular monthly meetings between TMAC, relevant ministries, and all HMAU's and clearance operators are convened, during which progress is reported and questions and concerns raised.³⁰ In addition, a mid-year workshop for all stakeholders is planned, along with an end of year seminar to plan for the next fiscal year. Furthermore, orientation occurs in October, at the start of the new fiscal year, during which new TMAC personnel are brought up to date and HMAUs can make suggestions or raise concerns.³¹

TMAC began a partnership with Golden West in January 2019, under which Golden West provides technical advisory support to TMAC and other partners if requested. Golden West works closely with US MARFORPAC and US Department of Defense Humanitarian Demining Research and Development (US DOD HDR&D).³²

US MARFORPAC provides a range of trainings to TMAC related to demining, including in non-technical and technical survey, and IMAS EOD Level 1–2 training, which are supported by Golden West's technical advisor. Along with training in 2019, US MARFORPAC constructed mine detector training lanes and an outdoor classroom facility, and also donated 200 sets of personal protective equipment (PPE, face shields, and body armour) and 50 Minelab metal detectors. This effort took place following a program assessment where former students were interviewed at their respective HMAUs. US MARFORPAC, US HDR&D, and Golden West participated in the assessment. An EOD Level 3 course by US MARFORPAC, with Golden West providing technical advisor support and mentorship, was scheduled for June 2020, but was postponed due to COVID-19 restrictions.³³

GENDER AND DIVERSITY

TMAC does not have a policy or guidelines on gender and diversity. While TMAC attempts to diversify gender where applicable, challenges are posed by virtue of it being a military organisation. In 2019, 40% of staff at TMAC headquarters were women, though they were mainly occupying administrative positions.³⁴ This is, however, an increase on the 27.5% of female staff reported in 2018.³⁵ Furthermore, as at March 2020, TMAC had female senior grade officers serving as the deputy chief of special affairs, deputy chief of coordination and evaluation, budget officer, and head of admin and personnel.³⁶ There are no women working within the HMAUs as the Thai military does not allow women to perform combat duties and the roles are restricted to combat personnel.³⁷

Thailand's ongoing baseline survey of mine contamination is based on inclusive community interviews in all areas where the survey is conducted, during which women, girls, boys and men are consulted. In areas where they reside, minority groups are also consulted.³⁸ All these stakeholders are also present and consulted at the end of the survey, when the results are presented.³⁹

NPA has an organisational gender and diversity policy and all NPA survey teams are gender balanced. NPA encourages TMAC and the HMAUs to become gender balanced. When NPA conducts non-technical survey or community liaison activities, all local people are invited to participate, including women and children, and where they reside, members of minority groups. In NPA's field teams, 45% of personnel are women, while three of NPA's five managers (60%) are female as are two of the four supervisors (50%).⁴⁰

During non-technical survey, the Thai Civilian Deminer Association (TDA) speaks to both men and women and employs both male and female local informants as part of its teams. There is equal access to employment for qualified women and men in TDA survey and clearance teams, including for managerial level/supervisory positions. As at July 2020, women made up 15% of TDA operational roles, which was due to increase to 30%. Approximately 50% of managerial level/supervisory positions at TDA are held by women.⁴¹

INFORMATION MANAGEMENT AND REPORTING

TMAC established a data centre to process land release, risk education, and quality management data. It manages the central database using Excel and Arc Geographic Information System (GIS) mapping.⁴² ArcGIS Online is being used as part of a support package provided by the Department of Survey of the Royal Thai Armed Forces. ArcGIS assists TMAC and the HMAUs in data collection and dissemination, and mapping of SHAs and CHAs; and TMAC senior management in decision-making and operational planning.⁴³ The online system started in 2018 and became fully operational in 2019. HMAUs submit information to TMAC via the online system every 15 days, which allows for the verification of progress in the field and rectification of any issues.⁴⁴

NPA and TDA deem data in Thailand to be accurate and reliable, with data in the national information management system accessible to clearance organisations.⁴⁵ Thailand submits timely and accurate Article 7 reports. Thailand was requested by the Sixteenth Meeting of States Parties to provide an updated work plan to the Committee on Article 5 Implementation by 30 April 2019,⁴⁶ which it duly submitted. The Five-Year Plan provides details on remaining challenges, outstanding mine contamination, the prioritisation system, and land release outputs.⁴⁷

PLANNING AND TASKING

Thailand's Five-Year Plan, published in April 2019, is divided into two phases. During the first phase, from 2019–20, non-technical survey is prioritised in all outstanding SHAs with the expected cancellation of more than 269km². During this stage TMAC aims to release non-contaminated areas in the north-eastern region and parts of the eastern region, and gain more precise information on the mine-contaminated areas, including those along its border with Cambodia.⁴⁸ The second phase in 2021–23 will focus on technical survey and clearance of CHAs, based on the results of the national non-technical survey.⁴⁹ TMAC expects to release more than 90km² of land through technical survey and clearance during this phase. Thailand is operating under the assumption that the border demarcation issues will be resolved through bilateral cooperation, allowing the HMAUs to access these areas.⁵⁰

Table 2: Planned land release from Five-Year Plan 2019-23⁵¹

Region	Province	2019 (m ²)	2020 (m ²)	2021 (m ²)	2022 (m ²)	2023 (m ²)
North	Pitsanulok	9,510,170	9,510,170	9,510,180	LF	LF
	Chiang Mai	1,103,526	0	0	9,308,072	15,203,590
North-east	Buri Ram	15,587,142	0	3,896,786	LF	LF
	Surin	0	21,839,800	5,459,949	LF	LF
	Si Sa Ket	39,495,981	19,210,841	0	14,676,704	LF
	Ubon Ratchathani	21,364,937	59,617,291	0	0	20,245,556
East	Chanthaburi	3,562,113	374,111	LF	LF	LF
	Sa Kaeo	1,724,472	1,695,254	1,669,773	1,490,174	1,117,125
	Trat	26,912,587	34,354,161	3,107,481	3,005,862	2,274,040
South	Chumphon	1,586,760	1,586,760	LF	LF	LF
Totals		120,847,688	148,188,388	23,644,169	28,480,812	38,840,311

LF = Landmine Free

As at the end of October 2019, TMAC had released 142km² of SHA⁵², exceeding the land release target of 120.8km² in its Five-Year Plan, but had also identified 14.5km² of CHA. According to information provided to Mine Action Review, in 2020, TMAC planned to complete the resurvey and release an additional 154.3km² of SHA, slightly higher than in Thailand's five-year plan. It expects to have 64 CHAs at the end of the resurvey.⁵³

Thailand's Five-Year Plan replaced the land release targets detailed in its Second Article 5 deadline Extension request in 2017, in which the previous projected annual land release targets were 34.74km² (2017); 29.05 km² (2018); 72.12km² (2019); 72.06km² (2020); 73.23km² (2021); 74.54km² (2022), and 66.86km² (2023).⁵⁴

Thailand is prioritising the north-eastern region, the most heavily contaminated area of the country where 61% of SHAs are located, but is also taking into account resource limitation and access issues in certain areas. Thailand is prioritising clearance according to the following five criteria (in order of importance): development potential; the access needs of the local community; proximity to the local population; terrain and environmental challenges; and border and security concerns.⁵⁵

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

TMAC drafted its first national mine action standards (NMAS) with NPA's support in 2010, formally adopting them in June 2012, the year Thailand initiated a land release process.⁵⁶ Since then, the NMAS have undergone revisions in 2015 and 2018 in support of Thailand's shift towards using the full toolbox of land release methodologies rather than solely relying on technical survey and full clearance.⁵⁷ In 2018, TMAC revised the NMAS on worksite planning and released a new NMAS on the "Cancellation of SHAs by Evidence Based Survey", which has made it easier to cancel previously inflated, largely uncontaminated SHAs.⁵⁸ TMAC personnel have also been undergoing training on non-technical survey to improve speed and efficiency.⁵⁹

TMAC says it considers input from operators and IMAS guidelines when revising the NMAS, ensuring there is a proper consultation process with input gathered at the beginning of every fiscal year.⁶⁰ Operator SOPs are then adjusted accordingly.⁶¹

While TMAC did not officially amend any part of NMAS in 2019, there was a year-end seminar in which stakeholders agreed to fully incorporate and clarify land release methodology and terminology into NMAS to prevent confusion; extend consideration of specific dog breeds for future demining operations; revise EOD requirements for relevant staff from level 3 to level 4; and identify required updates to hazard marking and mine risk education.⁶²

NPA has developed an organisational SOP for the use of MDDs, but a national standard for the use of MDDs/ADS in technical survey and clearance operations had yet to be developed. As at early September 2020, Thailand was in the process of drafting a national standard on this and also on the use of mechanical assets in technical survey and clearance operations, in consultation with its implementation partners, Golden West, NPA, and TDA.⁶³

OPERATORS AND OPERATIONAL TOOLS

Table 3: Operational survey capacities deployed in 2019⁶⁴

Operator	NTS teams	NTS personnel	TS teams	TS personnel
HMAU 1	1	4	1	5
HMAU 2	2	7	2	8
HMAU 3	3	12	3	18
HMAU 4	1	5	1	5
HTMAC	0	0	2	10*
Totals	7	28	9	46

* These personnel can conduct both NTS (non-technical survey) and TS (technical survey) operations.

Table 4: Operational clearance capacities deployed in 2019⁶⁵

Operator	Manual teams	Total deminers	Dogs and handlers	Machines
HMAU 1	1	3	1	0
HMAU 2	1 (2)	14	1	4
HMAU 3	1 (3)	10	1	0
HMAU 4	1 (1)	7	1	0
HTMAC	1	2	2	0
Totals	5	36	6	4

All clearance in Thailand is conducted by the military due to national regulations on who can handle explosives and operate demining equipment. There are five HMAUs, supervised by TMAC with personnel from the Royal Thai Army and Royal Thai Navy, which carry out survey and clearance operations. In addition, there is one national operator, TDA, and an international operator, NPA, which carry out survey in support of the HMAUs.⁶⁶ TMAC expected the number of personnel to remain the same in 2020, but then planned to restructure and increase technical survey and clearance personnel for the second phase of its Five-Year Plan in 2021–23.⁶⁷

There may be changes to the regulations in the coming years due to the complications and related security concerns for military personnel entering the border areas. Once the TMAC/Cambodian Mine Action Centre (CMAC) border pilot project is completed, there is a possibility that civilian deminers will take part in clearance operations.⁶⁸

While only the military can conduct EOD, NGO operators work with the full support from HMAUs and are permitted to partially uncover buried landmines, which HMAU support staff then excavate and destroy.⁶⁹ In some cases military EOD staff are being embedded in NPA technical survey teams and for spot tasks, to conduct required EOD on mines and ERW detected and uncovered.⁷⁰

NPA has supported TMAC operations since 2011, conducting land release through non-technical and technical survey. In 2019, NPA deployed three non-technical survey teams for 12 months, supporting HMAUs 2 and 3. An additional NPA survey team was also deployed in 2019, which conducted non-technical survey for half the year and technical survey to support the MDDs operations for the other half.⁷¹ The use of two MDDs for technical survey was successfully piloted and NPA planned to continue to use MDDs throughout 2020.⁷²

TDA has supported TMAC operations since 2014.⁷³ In 2019, due to an increase in Japanese funding, the number of field staff increased from 18 field staff in 2018 to 22 persons in 2019, including approximately 8 local key informants.⁷⁴ TMAC's focus in 2019 was on expanding its "SIMA", its survey to identify mined areas comprised of non-technical survey, technical survey, and clearance of EOD spot tasks, which is focusing on technical survey capacity.⁷⁵ TDA is planning to do research on mine detection using bees, but as at July 2020 this had yet to begin.⁷⁶

TMAC now employs a comprehensive toolbox approach, including use of mechanical assets to identify the existence of landmines if the terrain permits.⁷⁷

DEMINER SAFETY

In 2019, two people from HMAU-1 (Sa Kaeo province) and two people from HMAU-2 (Trat province) were injured while clearing PMN mines. Every accident is investigated first by the HMAU and then by TMAC, and operations are suspended while personnel undergo refresher training. Lessons learned from accidents are discussed and reviewed for future operations, and are used in TMAC training.⁷⁸

LAND RELEASE OUTPUTS AND ARTICLE 5 COMPLIANCE

LAND RELEASE OUTPUTS IN 2019

Thailand released a total of more than 142km² in 2019, of which nearly 0.1km² was cleared, nearly 13.6km² was reduced through technical survey, and more than 128.4km² was cancelled through non-technical survey.

In addition, over 0.32km² of previously unrecorded anti-personnel mine contamination was found and added to the database as CHA in 2019.⁷⁹ This comprised 247,245m² in Sa Kaeo, 2,332m² in Trat, 2,030m² in Chanthaburi, and 73,429m² in Buri Ram.⁸⁰

SURVEY IN 2019

A total of more than 142km² was released through survey in 2019: over 128.4km² through non-technical survey and nearly 13.6km² through technical survey (see Tables 5 and 6). This marked a huge increase on the 31.2km² released through survey in 2018, when focused survey efforts by TMAC only properly began in November.⁸¹

In 2019, over 0.32km² of additional confirmed mined area was discovered in Sa Kaeo, Trat, Chanthaburi, and Buri Ram provinces.⁸²

Compared to the previous year, NPA saw a 56% increase in the amount of land it cancelled in 2019. This was due to the addition of a one non-technical survey team and also increased support from TMAC and the HMAU-2 and HMAU-3, which seconded additional personnel who were embedded in all NPA's non-technical survey teams.⁸³

In 2019, NPA successfully piloted technical survey with MDDs. NPA reported that the results were very promising and that it expected NPA technical survey operations in 2020 to yield greater results.⁸⁴

CLEARANCE IN 2019

A total of nearly 0.1km² was cleared by 3 HMAU units and the HTMAC in 2019 (see Table 7).⁸⁵ The decrease on the 0.5km² cleared in 2018 is due to the focus on non-technical and technical survey in 2019, rather than on clearance which was only conducted where deemed absolutely necessary, for example in areas close to communities.⁸⁶

In addition, in 2019, HMAU units destroyed 36 anti-personnel mines, 1 anti-vehicle mine, and 17 items of UXO during EOD spot tasks in six districts.⁸⁷

All mined areas cleared in 2019 contained anti-personnel mines.⁸⁸

Table 5: Cancellation through non-technical survey in 2019⁸⁹

Province	Operator	Area cancelled (m ²)
Sa Kaeo	HMAU 1	414,122
Chanthaburi	HMAU 2	365,676
Trat	HMAU 2 (+NPA)	24,299,440
Buri Ram	HMAU 3 (+TDA)	10,283,323
Si Sa ket	HMAU 3 (+NPA and TDA)	41,471,791
Ubon Ratchathani	HMAU 3 (+TDA)	20,234,757
Phitsanulok	HMAU 4	3,267,516
Chiang Mai	HMAU 4	19,101,812
Mae Hong Son	HMAU 4	6,513,376
Chumphon	HTMAC	2,490,290
Total		128,442,103

Table 6: Reduction through technical survey in 2019⁹⁰

Province	Operator	Area reduced (m ²)
Sa Kaeo	HMAU 1	697,514
Chanthaburi	HMAU 2	46,206
Trat	HMAU 2	148,022
Buri Ram	HMAU 3	6,316,344
Si Sa ket	HMAU 3	5,627,443
Ubon Ratchathani	HMAU 3	131,977
Chumphon	HTMAC	627,272
Total		13,594,778

Table 7: Mine clearance in 2019⁹¹

Province	Operator	Area cleared (m ²)	AP mines destroyed	AV mines destroyed	UXO destroyed
Sa Kaeo	HMAU 1	65,869	2,539	4	0
Trat	HMAU 2	18,730	63	2	6
Si Sa ket	HMAU 3	3,220	42	0	12
Chumphon	HTMAC	7,459	33	0	134
Totals		95,278	2,677	6	152

AP = Anti-personnel AV = Anti-vehicle

ARTICLE 5 DEADLINE AND COMPLIANCE



Table 8: Five-year summary of AP mine clearance

Year	Area cleared (m ²)
2019	95,278
2018	528,902
2017 ⁹²	427,983
2016	394,238
2015	2,047,662
Total	3,494,063

Thailand has made significant improvements to its mine action programme since the Third Review Conference in Maputo in 2014, moving away from an over reliance on clearance to the use of the full range of land release methodologies demonstrated in its Five-Year Plan. Thailand plans to cancel more than 269km² through non-technical survey from November 2018 to October 2020 before moving on to technical survey and clearance of the remaining 90km² over the following three years.

Thailand is making excellent progress in meeting and exceeding its annual land release targets for survey during the first phase of the Five-Year Plan, which focuses on resurvey. As at June 2020, COVID-19 had not impacted operations too severely and while technical survey with the use of MDDs had to be postponed, non-technical survey had continued more or less as planned.⁹³

However, TMAC has set extremely ambitious targets for the second phase, during which TMAC plans to release more than 23.6km² of mined area through technical survey and clearance in 2021, nearly 22.5km² in 2022, and more than 38.8km² in 2023.⁹⁴ To meet these targets, TMAC plans to increase the number of technical survey and clearance personnel, while decreasing non-technical survey personnel, with an overall increase in the total number of personnel during the second phase (2021–23).⁹⁵ Current overall capacity is far from sufficient to meet the clearance targets.

Whether the required upscaling of technical survey and clearance capacity proves possible remains to be seen. NPA believes that Thailand's Article 5 deadline of end October 2023 is too ambitious due to the lack of sufficient clearance capacity to address the CHAs established from the ongoing baseline survey and because the border demarcation issues with Cambodia, which prevent access to certain mined areas and have yet to be resolved.⁹⁶ Thailand will need to significantly increase its technical survey and clearance capacity and will need to apply effective and efficient land release methodology in order to reach its current Article 5 deadline. This implies both more staff as well as more equipment, i.e. detectors, personal protective equipment, mechanical assets, and MDDs. With a predicted 20km² of confirmed mined area requiring clearance, NPA believes that Thailand would need to more or less double its current capacity (potentially with less deminers if more mechanical assets/MDDs were made available) to reach the current deadline.⁹⁷

Thailand fully commits to the aim of completing clearance by its Article 5 deadline of 2023⁹⁸ and TMAC believes that Thailand is on track to meet the 2023 goal, but highlights that more assistance and support are welcomed to expedite TMAC's work and further ensure success.

TMAC also recognises that cooperation between Thailand and Cambodia is vital in order for Thailand to meet its 2023 Article 5 deadline, including access to sensitive (non-demarcated) mined areas along the Thailand-Cambodia border, which will require close coordination.⁹⁹ Areas to be demarcated (ADs) have been divided into two categories: areas that can be accessed immediately and more complicated areas where access will need to be negotiated. In border areas with Lao PDR, 96% of the land boundary has been demarcated and there are no security concerns, while the border areas with Cambodia are still subject to the demarcation process.¹⁰⁰

Improved relations between Thailand and Cambodia have opened the way for increased contact with Cambodia on border cooperation. The Thailand-Cambodia General Border Committee, chaired by the Deputy Prime Minister and Minister of Defence from both countries, has agreed that TMAC and CMAC can cooperate to conduct demining along the Thai-Cambodian border.¹⁰¹

In September 2018, TMAC and CMAC met and agreed to find a task for a pilot border project for landmine clearance: a small area that could be cleared within a month as a symbolic demonstration of two sides working together. On 14 January 2019, TMAC and CMAC held meetings in Sa Kaeo province on the Thai side of the border and Banteay Meanchey province on the Cambodian side to further discuss the demining cooperation project. On 16–17 June 2019, TMAC and CMAC met in Sa Kaeo province, to conduct a survey and assess prospective areas for demining.¹⁰² On 22 and 23 September 2019, TMAC and CMAC, accompanied by senior representatives of the General Border Committee, agreed upon the respective mined areas on a demarcated section of the Thai-Cambodia border, distanced not too far apart.¹⁰³

The selected pilot project area on the Thai side is in Sano-noi Village, Tha-kham Subdistrict, Aranyaprathet District, Sa Kaeo province. The selected area on the Cambodian side is Kilobuan Village, Poipet District, Banteay Meanchey province.¹⁰⁴ TMAC and CMAC signed the record for the pilot site survey on 2 March 2020,¹⁰⁵ after which operations were expected to start shortly thereafter and were expected to take no more than 50 days to complete.¹⁰⁶ Unfortunately, however, operations had yet to commence at the time of writing, due to the impact of COVID-19 and the cessation of cross-border activity since mid-March.¹⁰⁷

PLANNING FOR RESIDUAL RISK AFTER COMPLETION

TMAC's mandate covers only formal SHAs and CHAs. Any explosive ordnance (including landmines) found outside of SHAs and CHAs comes under police jurisdiction. Once Thailand fulfils its Article 5 obligations, TMAC will act as the information and knowledge centre for mines and UXO. If previously unknown mine contamination (i.e. residual contamination) is discovered following completion, the local mine risk education network will inform the local authorities, community leaders, and relevant government agencies. If the area in question is under the jurisdiction of the military, combat engineers will address the contamination. If located in other areas, police EOD teams will take the lead in addressing the contamination.¹⁰⁸

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| <p>1 Statement of Thailand, Anti-Personnel Mine Ban Convention (APMBC) Fourth Review Conference, Oslo, 27 November 2019; APMBC Article 7 Report (covering 2018), Section 4; and email from Ft. Lt. Chotiboon Anukulvanich, Interpreter, on behalf of Lt.-Gen. Sittipol Nimnuan, Director General, TMAC, 27 February 2020.</p> <p>2 APMBC Article 7 Report (covering 2018), Form D.</p> <p>3 Statement of Thailand, Fourth Review Conference, Oslo, 27 November 2019; and email from Ft. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.</p> <p>4 Email from Ft. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020; and Article 7 Report (covering 2018), Section 4.</p> <p>5 Statement of Thailand, APMBC Fourth Review Conference, Oslo, 27 November 2019; email from Ft. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, on 27 February 2020; and Article 7 Report (covering 2018), Section 4.</p> <p>6 Five-Year Humanitarian Mine Action Plan, 1 November 2018–31 October 2023, p. 12 (hereafter, Five-Year Plan), submitted alongside Thailand's Article 7 Report (covering 2018).</p> <p>7 Five-Year Plan, p. 13.</p> <p>8 <i>Ibid.</i>, p. 12.</p> <p>9 Email from Aksel Steen-Nilsen, Country Director, NPA, 30 March 2020.</p> <p>10 Email from Aksel Steen-Nilsen, NPA, 30 March 2020.</p> <p>11 Article 7 Report (covering 2018), Sections 4 and 8.</p> <p>12 Email from Aksel Steen-Nilsen, NPA, 30 March 2020.</p> <p>13 Article 7 Report (covering 2018), Form D.</p> <p>14 Interview with Lt.-Gen. Prasopchai Kongburan, TMAC, in Geneva, 8 June 2017.</p> <p>15 Five-Year Plan, p. 49.</p> <p>16 Interview with Shushira Chonhenchob, NPA, Bangkok, 9 April 2019.</p> | <p>17 2017 Article 5 deadline Extension Request, p. 1.</p> <p>18 Interview with Col. Terdsak Trirattanagool, Assistant Director General, TMAC, Bangkok, 15 May 2017.</p> <p>19 Email from Ft. Lt. Chotiboon Anukulvanich, Interpreter, TMAC (on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC), 15 August 2019.</p> <p>20 Email from John Kelsch, Thailand Country Director/Technical Advisor, Golden West, 1 June 2020.</p> <p>21 Email from Ft. Lt. Chotiboon Anukulvanich, TMAC (on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC), 15 August 2019.</p> <p>22 Interviews with Shushira Chonhenchob, NPA; and with Lt.-Gen. Sittipol Nimnuan, TMAC, in Bangkok, 9 April 2019.</p> <p>23 Email from Ft. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.</p> <p>24 Interview with Maj.-Gen. Terdsak Trirattanagool, TMAC, Bangkok, 27 April 2018; 2017 Article 5 deadline Extension Request, p. 26.</p> <p>25 Five-Year Plan, p. 20.</p> <p>26 <i>Ibid.</i>, p. 21.</p> <p>27 2017 Article 5 deadline Extension Request, p. 28; and Five-Year Plan, p. 20; and Statement of Thailand, Fourth Review Conference, Oslo, 27 November 2019.</p> <p>28 Email from Aksel Steen-Nilsen, NPA, 30 March 2020.</p> <p>29 Emails from Aksel Steen-Nilsen, NPA, 28 March 2019 and 30 March 2020.</p> <p>30 Emails from Ft. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020; and Aksel Steen-Nilsen, NPA, 30 March 2020.</p> <p>31 Email from Ft. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.</p> <p>32 Email from John Kelsch, Golden West, 1 June 2020.</p> <p>33 Emails from John Kelsch, Golden West, 1 June and 22 July 2020.</p> |
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- 34 Ibid.
- 35 Email from Shushira Chonhenchob, NPA (on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC), 8 April 2019.
- 36 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.
- 37 Emails from Shushira Chonhenchob, NPA (on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC), 8 April 2019; and Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.
- 38 Emails from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020; and Aksel Steen-Nilsen, NPA, 30 March 2020.
- 39 Email from Aksel Steen-Nilsen, NPA, 30 March 2020.
- 40 Emails from Aksel Steen-Nilsen, NPA, 28 March 2019 and 30 March 2020.
- 41 Email from Amornchai Sirisai, Director, TDA, 18 July 2020.
- 42 Emails from Shushira Chonhenchob, NPA (on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC), 8 April 2019; and Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.
- 43 Email from Shushira Chonhenchob, NPA (on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC), 8 April 2019.
- 44 Ibid.; and email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.
- 45 Emails from Aksel Steen-Nilsen, NPA, 28 March 2019 and 30 March 2020; and Amornchai Sirisai, TDA, 21 March 2019.
- 46 Decisions on the request submitted by Thailand for an extension of the deadline for completing the destruction of anti-personnel mines in accordance with Article 5 of the APMBC, 16MSP, para. iii.
- 47 Five-Year Plan, p. 5.
- 48 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020; and Article 7 Report (covering 2018), Section 4.
- 49 Five-Year Plan, p. 13; and Statement of Thailand, Fourth APMBC Review Conference, Oslo, 27 November 2019.
- 50 Five-Year Plan, p. 13.
- 51 Ibid.
- 52 Statement of Thailand, Fourth Review Conference, Oslo, 27 November 2019; and email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.
- 53 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, on 27 February 2020; and Article 7 Report (covering 2018), Section 4.
- 54 2017 Article 5 deadline Extension Request, p. 5.
- 55 Five-Year Plan, p. 45; and email from Shushira Chonhenchob, NPA (on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC), 8 April 2019.
- 56 Thai National Mine Action Standards, 1 April 2015.
- 57 Email from Shushira Chonhenchob, NPA (on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC), 8 April 2019.
- 58 Emails from Aksel Steen-Nilsen, NPA, 28 March 2019; and Flt. Lt. Chotiboon Anukulvanich, TMAC (on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC), 15 August 2019.
- 59 Statement of Thailand, Committee on Article 5 Implementation, Geneva, 29 November 2018.
- 60 Email from Shushira Chonhenchob, NPA (on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC), 8 April 2019.
- 61 Ibid.
- 62 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, on 27 February 2020.
- 63 Emails from Aksel Steen-Nilsen, NPA, 30 March 2020; and Eva Veble (on behalf of Aksel Steen-Nilsen), NPA, 9 September 2020.
- 64 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.
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- 66 Five-Year Plan, p. 11; and email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.
- 67 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.
- 68 Interview with Lt.-Gen. Sittipol Nimnuan, TMAC, Bangkok, 9 April 2019.
- 69 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.
- 70 Email from Aksel Steen-Nilsen, NPA, 30 March 2020.
- 71 Ibid.
- 72 Ibid.
- 73 Email from Amornchai Sirisai, TDA, 18 July 2020.
- 74 Emails from Amornchai Sirisai, TDA, 18 and 20 July 2020.
- 75 Email from Amornchai Sirisai, TDA, 18 July 2020.
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- 77 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt. Gen. Sittipol Nimnuan, TMAC, 27 February 2020.
- 78 Ibid.
- 79 Email from Aksel Steen-Nilsen, NPA, 30 March 2020.
- 80 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.
- 81 Email from Shushira Chonhenchob, NPA (on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC), 8 April 2019.
- 82 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.
- 83 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020. Included in the cancellation data and working together with the HMAU 2 and 3, NPA reported cancelling over 23km² in 2019 (over 19km² in Ubon Ratchathani, over 1km² in Trat, and over 3km² in Surin). Email from Aksel Steen-Nilsen, NPA, 30 March 2020.
- 84 Email from Aksel Steen-Nilsen, NPA, 30 March 2020.
- 85 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.
- 86 Ibid.
- 87 Ibid.
- 88 Ibid.
- 89 Ibid.; and Article 7 Report (covering 2018), Section 4. TDA reported releasing a combined total of 10.5km² through both non-technical and technical survey in Buriram province and 10.5km² in Sri Sa province, in 2019. Emails from Amornchai Sirisai, TDA, 18 and 20 July 2020.
- 90 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020; and Article 7 Report (covering 2018), Section 4. Included in the technical survey data and working together with the HMAU 3, NPA reported reducing 48,849m² in 2019 in Ubon Ratchathani. Email from Aksel Steen-Nilsen, NPA, 30 March 2020.
- 91 Ibid.; and Article 7 Report (covering 2018), Section 4.
- 92 Thailand's Article 7 report includes only TMAC's operating results.
- 93 Email from Aksel Steen-Nilsen, NPA, 17 June 2020.
- 94 Five-Year Plan, p. 5.
- 95 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC, 27 February 2020.
- 96 Email from Aksel Steen-Nilsen, NPA, 30 March 2020.
- 97 Ibid.
- 98 Statement of Thailand, Fourth Review Conference, Oslo, 27 November 2019.
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- 101 Email from Shushira Chonhenchob, NPA (on behalf of Lt.-Gen. Sittipol Nimnuan, TMAC), 8 April 2019.
- 102 Article 7 Report (covering 2018), Section 8.
- 103 Ibid.; and 'CMAC, Thais join forces to clear mines at border provinces', *The Phnom Penh Post*, 24 September 2019, at: bit.ly/3ejuyrW.
- 104 Email from Flt. Lt. Chotiboon Anukulvanich, on behalf of Lt. Gen. Sittipol Nimnuan, TMAC, on 27 February 2020; and Article 7 Report (covering 2018), Section 8.
- 105 Cambodian Mine Action Centre (CMAC), "A record of discussions signed between CMAC and TMAC", 3 March 2020, available at: bit.ly/34yiUEW.
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