

ANTI-PERSONNEL MINE BAN CONVENTION ARTICLE 5 DEADLINE: 1 MARCH 2020
THREE-YEAR INTERIM EXTENSION REQUESTED TO 1 MARCH 2023

KEY DATA

ANTI-PERSONNEL (AP) MINE CONTAMINATION:

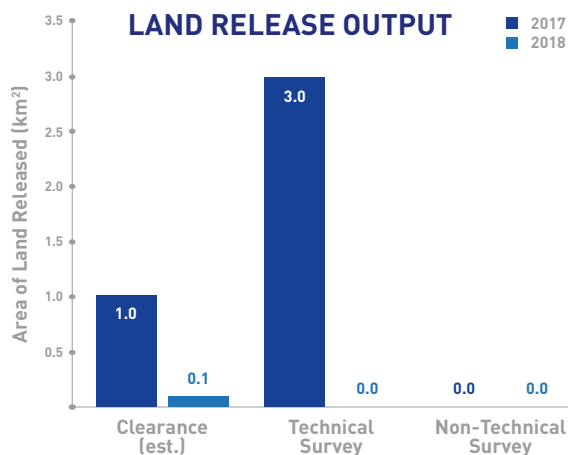
HEAVY, 50km² (ESTIMATED)
at least

AP MINE CLEARANCE IN 2018

0.1km²
(ESTIMATED)

AP MINES DESTROYED IN 2018

1,691
(ESTIMATED)



CURRENT LIKELIHOOD OF MEETING 2025 CLEARANCE TARGET (as per Maputo +15 Political Declaration aspiration): **LOW**

KEY DEVELOPMENTS

Intensive conflict continued between the Saudi Arabia-led Gulf coalition supporting the Aden-based internationally recognised government and Houthi rebels controlling Sana'a and much of the north. Houthi forces reportedly laid significant numbers of mines, including those of an improvised nature during 2018 and 2019. Yemen submitted an Article 5 deadline extension request, seeking three years beyond March 2020 to determine the extent of contamination, after which it will submit a further request setting out a strategy for survey and clearance. Five SafeLane international staff died in a single incident in January 2019 while transporting mines and seven other deminers were killed in a detonation at a storage area holding mines and explosive remnants of war (ERW) in May 2019.

RECOMMENDATIONS FOR ACTION

- The Yemen Executive Mine Action Centre (YEMAC) should strengthen coordination between its operations in government-controlled and Houthi-controlled areas to ensure consistent application of national standards in management and operations.
- YEMAC should conduct a nationwide survey to generate a baseline of mine contamination.
- In the absence of a long-term plan, YEMAC should draw up an annual workplan for deployment of available assets on priority regions and tasks.
- YEMAC should update national standards and expand them to cover survey and clearance of mines of an improvised nature.
- Yemen should facilitate access and deployment by international mine action operators to achieve a rapid expansion of capacity, raise standards, and accelerate survey and clearance.
- YEMAC should drastically improve data collection and reporting to meet its Anti-Personnel Mine Ban Convention (APMBC) transparency obligations providing comprehensive reports on the location, scope, and results of mine action operations, including disaggregated data detailing release of mined land through survey and clearance and items destroyed.

- YEMAC should address the causes of the high level of fatalities among deminers in the course of operations in 2018 and 2019.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2018)	Performance Commentary
UNDERSTANDING OF CONTAMINATION (20% of overall score)	4	The Yemen Executive Mine Action Centre (YEMAC) reports the level of contamination as unknown. Contamination data included hundreds of square kilometres of suspected mined areas before the onset of conflict in 2015 which has resulted in significant but unknown amounts of additional contamination, including from mines of an improvised nature. YEMAC is seeking to develop a new baseline of contamination by March 2023.
NATIONAL OWNERSHIP & PROGRAMME MANAGEMENT (10% of overall score)	3	YEMAC is wholly dependent on international donor support. Conflict has undermined nationwide management of mine action, leaving YEMAC with two programmes, one for areas controlled by the Aden-based government and the second for areas controlled by Houthi forces controlling Sana'a, with little ability to coordinate between them.
GENDER (10% of overall score)	3	The demands of Yemen's mine action emergency have eclipsed the issue of gender, which is not mentioned in Yemen's Article 5 extension request. UNDP support to YEMAC seeks to integrate gender mainstreaming into YEMAC data collection.
INFORMATION MANAGEMENT & REPORTING (10% of overall score)	3	YEMAC said its mine action database was no longer fit for purpose. No information was available to operators on areas surveyed or cleared and the sparse operating results available did not disaggregate clearance of mines from clearance of explosive remnants of war (ERW).
PLANNING AND TASKING (10% of overall score)	5	Yemen does not have a national strategy or plan, but continued operations on an emergency basis focused on life-saving interventions.
LAND RELEASE SYSTEM (20% of overall score)	4	Yemen had national standards that YEMAC said were out of date. It also complained that its equipment is obsolete and levels of deminer training were inadequate, particularly for dealing with mines of an improvised nature.
LAND RELEASE OUTPUTS AND ARTICLE 5 COMPLIANCE (20% of overall score)	5	YEMAC clearance of area and items appears to have fallen in 2018 but lack of comprehensive data disaggregating mine clearance from clearance of ERW prevents a clear determination of outputs.
Average Score	4.0	Overall Programme Performance: POOR

DEMINING CAPACITY

MANAGEMENT

- Yemen Executive Mine Action Centre (YEMAC)

NATIONAL OPERATORS

- YEMAC
- Yemen Army Engineers

INTERNATIONAL OPERATORS

- Danish Demining Group (DDG)
- SafeLane/Dynasafe
- The HALO Trust (since 2019)
- Norwegian People's Aid (NPA) (due to start in 2019)

OTHER ACTORS

- United Nations Development Programme (UNDP)

UNDERSTANDING OF AP MINE CONTAMINATION

YEMAC states that “the level of contamination and the subsequent impact by AP mines in Yemen is not known.”¹

A Landmine Impact Survey in 2000 found mine contamination in 18 of Yemen’s 21 governorates resulting from conflicts in 1962–69 and 1970–83, as well as mines laid in border areas between North and South Yemen before they unified in 1990, and mines from successive conflicts that erupted since 1994. Operators have also encountered large quantities of abandoned explosive ordnance, including some stockpiles of mines. The continuing conflict that flared in March 2015 has “changed the extent and complexity of contamination dramatically.”²

NEW CONTAMINATION

Houthi officials have acknowledged using landmines³ and Houthi forces reportedly laid mines in at least six governorates in 2016.⁴ Since 2017, Houthi and associated forces have laid large numbers of anti-personnel mines and anti-vehicle mines, including mines of an improvised nature, in particular along Yemen’s west coast, in a bid to stall the advance of pro-government Yemeni and Saudi coalition forces towards the strategic port town of Hodeida. Some anti-vehicle mines were reportedly modified to detonate with the weight of a person,⁷ making them anti-personnel mines falling within the APMBC.

Current conflicts have also resulted in increased contamination from mines of an improvised nature, such as devices initiated by a pressure plate or crushed necklace, as well as from improvised devices activated remotely or by photo-electric cells. Mines of an improvised nature as well as other improvised devices have been produced in Yemen “on an industrial scale” and laid along roads, inside buildings, and built into house walls, posing a serious hazard to displaced families returning to their property.⁸

Yemen’s second Article 5 deadline extension request submitted in 2014 identified 107 confirmed minefields covering a total of 8.1km² but also an additional 438 suspected hazardous areas covering 338km². By 2017, YEMAC said it had 569 suspected mined areas affecting 323.5km².³ YEMAC believed a significant proportion of this might be released or reduced through survey. However, Yemen’s continuing conflict has largely halted survey of suspected hazardous areas (SHAs) and resulted in the addition of new contamination by mines, including mines of an improvised nature, preventing a determination of the extent and the recontamination of previously cleared areas.⁴

Independent investigators have documented three types of mine of an improvised nature used by Houthi forces on Yemen’s west coast that are identical to, or closely resemble, conventional mines. They include a Claymore-type mine almost identical to a Chinese-made directional mine (Type 150-A GLD), a larger directional mine similar to an Iranian-made mine (M18A2), and an anti-vehicle mine similar to Russian-made TM46 mines. Some of the mines of an improvised nature have serial numbers, indicating mass production.⁷ The UN reported the appearance of improvised sea mines in the Red Sea since 2017. These were probably deployed by Houthi forces and pose an obvious threat to shipping.¹⁰

A panel of international experts reported to the UN Human Rights Council in August 2019 that it had confirmed civilian casualties caused by anti-personnel and anti-vehicle mines emplaced by Houthi fighters in Aden, Hudayda, Lahej, and Taiz governorates.¹¹

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Yemen’s inter-ministerial National Mine Action Committee (NMAC), which formulated national mine action policy, was reported in 2019 to have disbanded leaving YEMAC as regulator and implementing agency with responsibility for setting policy, planning and coordinating mine action, and as the sole national operator.¹²

YEMAC was established in Sana’a in January 1999 as a national mine action agency. Since conflict flared between the internationally-recognized government, based in the south, and the Houthi movement controlling much of the north, YEMAC has in practice split into two, centred round a headquarters in Aden running operations in government controlled areas and the Sana’a office running operations in the north. YEMAC said its Aden headquarters issued quarterly task orders and maintained records of the work conducted.

YEMAC is supported by Regional Executive Mine Action Branches (REMABs) in Aden, set up in 1999; al-Mukalla (Hadramout governorate), which opened in March 2004; and Saada (April 2016).¹³ The extent to which they are operational is not clear. In 2019, YEMAC planned to open new offices in Taiz to support operations around Hodeida and in Marib for operations in al-Jawf governorate.¹⁴

YEMAC planned to open a coordination centre in 2019 to separate its management and operational functions, a development which it expected would accelerate clearance. Among its responsibilities, the coordination office would be responsible for accrediting operators. As at May 2019, YEMAC was identifying premises for the coordination office and expected to have it operational before the end of the year.¹⁵

The United Nations supported mine action in Yemen from 1999 to 2003 through a programme implemented by the UN Office for Project Services (UNOPS). From 2003, the programme came under full national management. The UN Development Programme (UNDP) deployed an international adviser to YEMAC at the end of 2014 to support planning and programme management. In 2018, its international staff included a chief technical adviser and a planning and reporting specialist in Sana'a and a technical advisor based in Aden. National staff included two posts in Sana'a and

one in Aden. In 2019, UNDP planned to recruit up to eight additional international staff and three or more national staff to strengthen the programme capacity.¹⁶

Yemen's mine action is funded by international donors. UNDP estimated total funding required for Phase V at \$39.9 million. Funding received in 2018 amounted to a little over \$9 million in 2018, approximately the same level as in 2017.¹⁷ Additionally, Saudi Arabia's King Salman Fund agreed with Dynasafe Middle East Project Management in 2018 to finance a US\$40 million demining project.¹⁸

GENDER

Mine action plans and priorities set out in Yemen's latest Article 5 deadline extension request make no reference to gender. UNDP reported placing emphasis on mainstreaming gender principles into plans aiming for equal participation as beneficiaries, employees, and decision-makers in mine action. This included ensuring survey information is collected by organisations representing women and girls as well as men and boys; that data collected is disaggregated by gender and age; and that risk education materials address the risks associated with all gender roles.¹⁹

INFORMATION MANAGEMENT AND REPORTING

YEMAC maintains an Information Management System for Mine Action (IMSMA) database but its Article 5 deadline extension request described it as "outdated" and "not usable."²⁰ UNDP observed that the system, although outdated, was becoming more reliable. In 2019, it added an international information management specialist to its Aden-based staff.²¹

PLANNING AND TASKING

Yemen does not have a strategic plan or annual workplans for tackling mines, improvised devices, or any ERW. Mine action in 2018 continued to be conducted on an emergency basis. The priority set out in Yemen's Article 5 deadline extension request in 2019 was to conduct nationwide survey to generate a baseline of contamination that would provide a basis for long-term planning. YEMAC reportedly intended to assign its planned coordination office the task of drawing up a new planning system.²²

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

Yemen has national mine action standards which were based on the International Mine Action Standards (IMAS) when they were drawn up in 2007, but they have not been updated. YEMAC said they are out of date and that its deminers do not apply standing operating procedures (SoPs) based on the standards consistently. YEMAC has also said efficiency was lowered by its deminers' lack of training, particularly for coping with mines of an improvised nature, and by old or obsolete equipment.²³

YEMAC had an unspecified number of quality assurance (QA) teams that it said conduct regular field visits and sampling of cleared land but it said QA/quality control (QC) had become "disjointed" as SoPs were not always followed and there was no systematic collection of QA/QC reports.²⁴

OPERATORS

YEMAC is the main operator, with about 900 deminers at the start of 2019, one half of them managed by YEMAC headquarters in the south and the other half by YEMAC's Sana'a office.²⁵

SafeLane/Dynasafe operated with 304 staff and 32 demining teams. By early 2019, SafeLane reported the project employed 19 internationals, while national staff were mainly seconded from YEMAC. It expected the number of personnel to rise to around 400 in 2019.²⁶

Danish Demining Group (DDG) had a staff of 16 by the end of 2018, including two internationals and five national staff in Aden; six national staff in Mokha, Taiz; and three other national staff in Ataq, Shabwah. Activities have focused on risk education but a three-person non-technical survey team started working in Taiz from November 2018.²⁷

Norwegian People's Aid (NPA) was due to start a two-year programme supporting YEMAC's mine detection dog (MDD) programme in the last quarter of 2018 but after delays obtaining the necessary visas was expected to start work in 2019. The project calls for NPA to provide training for mine dog instructors, veterinarians, field supervisors, and three MDD groups to improve operational efficiency and expertise in survey and land release. It was also due to boost YEMAC's existing MDD capacity of 15 active dogs and 5 puppies and to look at improving its dog breeding capacity.²⁸ An NPA assessment mission visited Aden in June 2019 but as at August 2019, delays in issuing visas prevented it from deploying staff full time. NPA had selected 12 MDDs for the programme but they remained at NPA's Global Training Centre in Bosnia and Herzegovina.²⁹

YEMAC was preparing for increasing its engagement with international operators. HALO Trust received approval to operate in Yemen in May 2019 and opened an office in Aden in June. It planned to run courses on explosive ordnance disposal (EOD) and survey for YEMAC and to have teams mentored by HALO Trust international staff deployed in the field in the last quarter of 2019. YEMAC was also in discussion with the Swiss Foundation for Mine Action (FSD) on the possibilities of establishing a presence in Yemen.³⁰

OPERATIONAL TOOLS

YEMAC conducted manual mine clearance in 2018 with limited support from mine detection dogs, focusing on emergency clearance of high-impact spot tasks rather than large area clearance, giving priority to civilian and social infrastructure.³¹ YEMAC said land release through survey had decreased but was "sometimes used in specific cases." Through greater engagement with international operators, YEMAC planned to build up capacity for survey and increase the possibilities for land release by means other than manual clearance.³²

LAND RELEASE OUTPUTS AND ARTICLE 5 COMPLIANCE

Yemen's progress towards compliance with the APMBBC continued to be overshadowed by the conflict between the internationally recognised government, backed by the Saudi-led coalition, and Houthi forces controlling the capital which added new contamination and obstructed clearance. YEMAC has a clear position that the humanitarian imperative to mitigate the immediate threat to civilians posed by all types of explosive threats takes precedence over deadlines set under the APMBBC.³⁹

LAND RELEASE OUTPUTS IN 2018

YEMAC was able to conduct field operations in 81 districts of 16 governorates in 2018 and UNDP reported it released a total of 6,661,954m² through clearance, but this included all types of explosive items and only a small amount of mined area.⁴⁰ Mine Action Review has conservatively estimated clearance in 2018 to be of 0.1km². YEMAC was previously experienced mainly in clearing legacy minefields but these have become a low priority since the upsurge in conflict in 2015 when it increasingly had to tackle mines of an improvised nature and a wide range of ERW.

UNDP attributed the fall-off in productivity in 2018 to a number of factors, including stricter regulations on counting ERW; a minor cash flow issue in the second quarter of the year; and the transfer of staff from YEMAC to the Dynasafe/SafeLane operation funded by Saudi Arabia.⁴¹

SURVEY IN 2018

No data were available on land released through survey. UNDP said YEMAC conducted desk assessments, non-technical survey, and technical survey on a total area of over 825,000m² in nine different governorates.⁴²

DEMIMER SAFETY

YEMAC sustained heavy casualties in the course of clearing mines and improvised devices, reporting 14 deaths in 2018.³³ Disaggregated data on casualties and devices causing them was not available. A YEMAC deminer was also reportedly shot dead by a sniper in Taiz.³⁴

SafeLane/Dynasafe sustained 12 fatalities in the first half of 2019. Five international staff were killed in January 2019. KSrelief said they died in an accidental explosion as they were transporting mines from the project headquarters to a remote location for demolition.³⁵ SafeLane said later that ordnance in the truck contributed to the scale of the explosion but initial detonation was caused by an improvised explosive device (IED) placed under the passenger seat of their vehicle.³⁶ YEMAC said two government investigations into the incident found no evidence that SafeLane had been targeted by any armed group.³⁷ Six SafeLane deminers were killed in April in an explosion in a depot holding mines and ERW for destruction in the port city of Mokha. A seventh operator died of his injuries a day later. The nationality of those killed was not reported.³⁸

CLEARANCE IN 2018

YEMAC did not release mine clearance results for 2018 but its Article 5 deadline extension request in March 2019 reported that in 2016–18 it cleared a total of 646,455m² of mined area, and destroyed 14,021 anti-personnel mines, of which 1,576 were destroyed in 2017 and 988 in 2018.⁴³ The high number reported destroyed in 2016 is believed to have included large numbers of mines found in warehouses and stockpiles.⁴⁴ UNDP recorded clearance by YEMAC in 2018 of 680 anti-personnel mines together with 8,047 anti-vehicle mines, 1,163 IEDs, and 106,019 items of unexploded ordnance (UXO).⁴⁵

Table 1: YEMAC clearance in 2018⁴⁶

	Area cleared (m ²)	AP mines	AV mines	UXO	IED
YEMAC	6,661,954	680	8,047	106,019	1,163

Dynasafe/SafeLane did not report to YEMAC but separately reported clearing 2,523,500m² in 10 governorates in 2018, more than half of it in Taiz governorate, and destroying 1,011 anti-personnel mines.

Table 2: Dynasafe/SafeLane clearance operations 2018⁴⁷

	Area cleared (m ²)	AP mines	AV mines	UXO	IED
Dynasafe/SafeLane	2,523,500	1,011	27,314	21,980	2,793

ARTICLE 5 DEADLINE AND COMPLIANCE



Systematic mine clearance in Yemen has largely stalled in the past five years due to the upsurge in conflict in 2015 and a persistent shortage of funding and other resources. YEMAC reported total mine clearance of only 0.65km² for 2016–18. YEMAC was able to carry out emergency operations in 16 of Yemen's 21 governorates in 2018 but clearance in the last three years has mostly targeted UXO and improvised devices. The data in Table 3 below should be treated with caution.

Table 3: Five-year summary of AP mine clearance (2014–18)

Year	Area cleared (km ²)
2018	*0.1
2017	*1.00
2016	*3.00
2015	0
2014	0.34
Total	4.44

* Mine Action Review estimates

- 1 2018 Article 5 deadline Extension Request, March 2019, p. 19.
- 2 UNDP, "Emergency Mine Action Project, Annual Progress Report 2017", January 2018, p. 6; Yemen Article 5 deadline Extension Request Update, 10 March 2016, p. 4.
- 3 Article 7 Report (for 1 April 2016 to 30 March 2017), Form D.
- 4 Article 7 Report (for 2018), Form D.
- 5 J. Gambrell and M. Harb, "Landmines will be hidden killer decades after war", *Associated Press*, 24 December 2018.
- 6 Human Rights Watch, "Yemen: Houthi-Saleh forces using landmines", 20 April 2017. The affected governorates included Abyan, Aden, Lahej, Marib, Sana'a, and Taiz.
- 7 Human Rights Watch, "Yemen:Houthi landmines kill civilians, block aid", 22 April 2019.
- 8 Minutes of Yemen Mine Action Technical Working Group meeting, Amman, 26 July 2018.
- 9 Conflict Armament Research, "Mines and IEDs Employed by Houthis on Yemen's West Coast", September 2018, pp. 5–6, 11.
- 10 UN Security Council, Final Report of the Panel of Experts, UN doc. S/2018/68, 26 January 2018, Annexes 40 and 41, pp. 166–171.
- 11 "Situation of human rights in Yemen, including violations and abuses since September 2014", Report of the Group of Eminent International and Regional Experts, UN doc. A/HRC/42/17, 9 August 2019, pp. 8–9.
- 12 Article 7 Report (for 2018), Form A.
- 13 Email from Stephen Bryant, Chief Technical Advisor, UNDP, 22 July 2018.
- 14 2019 Article 5 deadline Extension Request, pp. 5, 22.
- 15 Interview with Ameen Saleh Alaqlili, Director, NMAP/YEMAC, in Geneva, 23 May 2019.
- 16 UNDP, "Emergency Mine Action Project, Annual Report 2018", 20 January 2019, p. 9.
- 17 *Ibid.*, p. 27; UNDP, Phase V, "Emergency Mine Action Project", Project Document, p. 1.
- 18 Email from Chris Clark, Global Operations Director, Dynasafe MineTech, 6 August 2018.
- 19 UNDP, "Emergency Mine Action Project, Annual Report 2018", 20 January 2019, pp. 18–19.
- 20 2019 Article 5 deadline Extension Request, p. 10.
- 21 UNDP, "Emergency Mine Action Project, Annual Report 2018", 20 January 2019, pp. 10–11.
- 22 Interview with Ameen Saleh Alaqlili, Director, NMAP/YEMAC, in Geneva, 23 May 2019.
- 23 2019 Article 5 deadline Extension Request, p. 16.
- 24 *Ibid.*, p. 17.
- 25 *Ibid.*, p. 12.
- 26 Email from Chris Clark, Safelane Global, 17 April 2019.
- 27 Email from Marie-Josée Hamel, Head of Programme, DDG Yemen, 3 April 2019.
- 28 UNDP, "Emergency Mine Action Project, Annual Report 2018", 20 January 2019, p. 13.
- 29 Email from Kenan Muftic, Head of Global Training Centre for MDDs/EDDs, NPA, 9 August 2019; "Capacity Building of the YEMAC MDD Program, 1st Quarterly Report, NPA, undated but 2019; email from Stephen Robinson, UNDP, 14 August 2019.
- 30 Interview with Ameen Saleh Alaqlili, NMAP/YEMAC, in Geneva, 23 May 2019; emails from Nick Torbet, Global Chief Technical Adviser (IEDD)/Head of Programme Development, HALO Trust, 29 May 2019; and interview with Alex van Roy, Regional Coordinator Middle East and Africa, FSD, 3 July 2019.
- 31 UNDP, "Emergency Mine Action Project, Annual Report 2018", 20 January 2019, p. 12.
- 32 2019 Article 5 deadline Extension Request, p. 21.
- 33 Interview with Ameen Saleh Alaqlili, NMAP/YEMAC, in Geneva, 23 May 2019.
- 34 Interview with Stephen Robinson and Aleksandar Mihailov, UNDP, in Geneva, 5 February 2019.
- 35 KSrelief, "KSrelief mourns loss of life following explosion related to Masam demining project in Yemen", Statement, 21 January 2019.
- 36 Emails from Chris Clark, Safelane Global, 17 and 23 April 2019.
- 37 Interview with Ameen Al-Aqli, YEMAC, in Geneva 23 May 2019.
- 38 Agence France Presse, "Six deminers killed in Yemen blast", 26 April 2019.
- 39 2019 Article 5 deadline Extension Request, p. 9.
- 40 UNDP "Emergency Mine Action Project, Annual Report 2018", 20 January 2019, Annex A, YEMAC Productivity Sheet, p. 26.
- 41 UNDP, "Emergency Mine Action Project, Annual Report 2018", 20 January 2019, p. 12.
- 42 *Ibid.*, p. 11. The governorates were Abyan, Aden, Al Dhale'e, Al Hodeidah, Amran, Hajjah, Lahej, Saada, and Taiz.
- 43 2019 Article 5 deadline Extension Request, Tables 5 and 7, pp. 14–15.
- 44 Email from Stephen Robinson, UNDP, 4 August 2019.
- 45 UNDP, "Emergency Mine Action Project, Annual Report 2018", 20 January 2019, Annex A, YEMAC Productivity Sheet, p. 26.
- 46 Email from UNDP, "Emergency Mine Action Project, Annual Report 2018", 20 January 2019, Annex A, YEMAC Productivity Sheet.
- 47 Email from Chris Clark, Safelane Global, 17 April 2019.