Presentation to the MASG:
Study on Operational Efficiency in Mine Action
“KPIs should be interpreted strictly in context. Taken in isolation they can give rise to misleading or invalid conclusions.”

(TNMA 07.11/02)
Background of the Study

- **Why**: At the request of the Chair of the MASG, Ambassador Yves Marek, funded by the Government of France.

- **Study objective**: identify and analyse how the performance of land release operations is measured with regards to efficiency and to provide MA stakeholders with examples of key performance indicators (KPIs) in different contexts.

- **Areas of focus**: the efficiency of land release operations.
Efficiency or Effectiveness?

**Efficiency**

A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results (outputs and outcomes).

“Doing the things right”

**Effectiveness**

The extent to which the interventions objectives were achieved, or are expected to be achieved, taking into account their relative importance.

“Doing the right thing”

“Doing the right thing”
Efficiency

Efficiency = \frac{\text{Input}}{\text{Output}} \ (\text{e.g. cost} / \text{m}^2).
Scope and Methodology

- Comparative analysis between different geographical regions; visits to a few case study countries.
- Focus on **country-level data** from primary sources (NMAA, MAOs, donors) and secondary sources (Landmine & Cluster Munition Monitor, Mine Action Review); site-level data also collected from MAOs.
- Aim to triangulate data from diverse sources in order to validate figures.
- Limited to **2015-2019** period (use recent data while eliminating COVID-19 related impacts).
- Selection of **6 KPIs** to measure efficiency (input/output) for quantitative analysis of the land release.
Key Performance Indicators (KPIs)

- Cost/m² of land cleared / released
- m² / deminer/day
- Cost/EO item found
- m² cleared / m² released
- Asset time/EO Item
- m²/EO item

Technical Note 07.11/02
Version 1.0
March 2021

Key Performance Indicators (KPIs) for Land Release and Stockpile Destruction Operations

International Mine Action Standards
Study Phases

- **Phase 1**: Desk Review
  - March 2022
  - Open-source, secondary data (Landmine & Cluster Munition Monitor, Mine Action Review, etc.)
  - 15 countries analysed

- **Phase 2**: Data Request to Stakeholders
  - April–June 2022
  - 20+ face-to-face and online discussions with NMAAs, MAOs and donors
  - Overview of study and types of data sought

- **Phase 3**: Data Collection
  - May–August 2022
  - Standardised data collection forms shared with 28 MAOs, 4 commercial orgs., 41 NMAAs, 4 IOs and 11 donors
  - 2 case study visits: Cambodia and Lebanon

- **Phase 4**: Data Verification
  - September 2022
  - Verification of data received and requests for clarification (inconsistencies, missing data) & additional data
  - Initial analysis of findings

- **Phase 5**: Final Report
  - October–December 2022
  - Analysis of final datasets
  - Preparation of report
  - Sharing of draft with stakeholders for inputs
  - Finalization of report

- **Data provided by MAOs**: covering operations at 8,622 tasks in 32 programmes in 21 different countries
- **Data from NMAAs**: 13 datasets sent by countries, in addition to open-source data from the Mine Action Review
- **Data from Donors**: information was provided by three donors
Data Received – 24 Countries Total
Challenges

- **General difficulty obtaining data** – sometimes completely unavailable or long administrative hurdles to overcome in order to share data

- **Incomplete datasets** – datasets received were often missing key information and did not always respect Minimum Data Requirements (IMAS 05.10, Annex B), which prevents their use for calculating all 6 KPIs

- **Inconsistency with calculations** – different approaches to counting within datasets (ex.] calculation of deminer days) which hinders ‘like-for-like’ KPIs

- **Divergent figures** – country totals varied when triangulating data (when possible) between different sources
Findings

KPI 1: Cost per m² of land released or cleared
Average cost ($) per m2 released, 2015-2019

Average: $1.4/m2 released
Average cost ($) per m² cleared, 2015-2019

Average: $3.87/m² cleared

USD per m²
Average cost ($) per m2 released, vs deminer salary 2015-2019

- \$0.0
- \$0.2
- \$0.3
- \$0.3
- \$0.3
- \$0.5
- $1.3
- $1.4
- $1.9
- $2.3
-$5.0
KPI 2: Cost per EO found
Average cost ($) per EO found, 2015-2019

Average: $1,989/EO item found
KPI 3: Land cleared per EO item
Average m2 cleared per EO item found, 2015-2019

Average: 1,458 m2 cleared/EO item found
Average m2 released per EO item found, 2015-2019

Average: 5,710 m2 released/EO item found
KPI 4: Cleared vs Released ratio
Cleared vs Released areas (m²) cleared, 2015-2019

Cleared: Thailand 98%, BiH 98%, Angola 98%, Zimbabwe 78%, South Sudan 76%, Sudan 72%, Iraq 70%, Tajikistan 62%, Serbia 57%, Cambodia 46%, Lebanon 45%, Colombia 45%, Sri Lanka 38%, Kosovo 31%, Croatia 20%, Western Sahara 17%, Afghanistan 7%, Azerbaijan 3%, Vietnam 0%, Lao PDR 0%

Released: Thailand 0%, BiH 0%, Angola 0%, Zimbabwe 0%, South Sudan 0%, Sudan 0%, Iraq 0%, Tajikistan 0%, Serbia 0%, Cambodia 0%, Lebanon 0%, Colombia 0%, Sri Lanka 0%, Kosovo 0%, Croatia 0%, Western Sahara 0%, Afghanistan 0%, Azerbaijan 0%, Vietnam 0%, Lao PDR 0%
Data source challenges - Percentage of land cleared versus land released

Data collected from MAOs
Data collected from NMAAs and open source data
KPI 5: Asset time / EO item
Distribution of the average deminer days per mine found per site

Overall average of deminer days per mine found: 75 days
KPI 6: m$^2$/ deminer / day
Distribution of the average m² cleared per deminer day per site

Overall average of m² cleared per deminer day: 44 m²
Next Steps

- Finalisation of analysis and full report draft: 31 October 2022

- Dissemination of draft report to stakeholders who shared data for review/inputs: November 2022

- Incorporation of inputs from stakeholders and finalisation of report: December 2022