ARMAC REGIONAL WORKSHOP
“Enhance mine action knowledge and promote future platforms for mine action knowledge sharing for ASEAN Member States”

Research and Development in Mine Action: Finding the Ways Forward

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Mine Action in the Era of SDGs

- **MA defined:**
  - activities which aim to reduce the social, economic and environmental impact of mines and (other) ERW including cluster munitions.
  - Also about people and society (livelihoods, resilience, sustainable recovery)
- **MA to sustain peace, security and promote SDGs (violence, conflicts, inclusive dev, equity, etc)**
- **Funding for MA:** declined.
How can we better address the complexity? The multidimensional issues?

Challenges to measure impact? Drivers of impact? Success or failure?

How can we be more innovative to balance the needs of the present and the future, esp in conflict and post-conflict environment (i.e. livelihoods, conflicts, NR, governance)?

Evidence based policy and intervention?

Knowledge for future generation? Sustain peace and inclusive development elsewhere?

This infographic is not intended to be comprehensive; rather it is an initial representation of the direct and indirect links between mine action and the SDGs. For the purposes of the study, ‘direct’ links are those mine action results that are considered to have an immediate effect on SDG targets. ‘Indirect’ links relate to mine action outcomes that contribute to SDG targets in the medium- and long-term.
Meta-Analysis: Lessons Learned, Success or Failure, impact


Data for the top outcome and process indicators excluding the Philippines cases.
Multivariate analysis

- Principle Component Analysis (PCA)
- Non-Metric Multidimensional Scalling (NMDS)
- Multiple Coresspondence Analysis (MCA)

**Usage:** patterns, temporal and spatial change.
Non-Metric Multidimensional Scaling (NMDS) Example

- Crop
- Livestock
- Fishery
- Forestry
- Nonfarm

## Predictive models

- **Logistic regression**
- **Multiple Linear Regression (MLR)**

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>Bigger Fishing Ground</th>
<th>Better Livelihood</th>
<th>Income Change</th>
<th>Shared Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFC drafts by-law and management plan</td>
<td>-</td>
<td>2.035*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>CFC represents CF in conflict management</strong></td>
<td>-</td>
<td>-</td>
<td><strong>-2.622</strong>**</td>
<td>-</td>
</tr>
<tr>
<td>CFC manages fisheries</td>
<td>2.856**</td>
<td>2.034*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>CFC coordinates with commune council</strong></td>
<td>-2.236*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>CFC develops network</strong></td>
<td>4.682***</td>
<td>2.643**</td>
<td>4.216***</td>
<td>2.715**</td>
</tr>
<tr>
<td>CFC engages with women in community</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td><strong>2.125</strong>*</td>
</tr>
<tr>
<td>Transparent fisheries management</td>
<td>-</td>
<td><strong>3.274</strong>**</td>
<td>2.859**</td>
<td>-</td>
</tr>
<tr>
<td>Represent all affected groups</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td><strong>2.647</strong>**</td>
</tr>
<tr>
<td>Women participate in CFC</td>
<td>-</td>
<td>2.573*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>CFC regularly meet</strong></td>
<td>-</td>
<td><strong>3.747</strong>***</td>
<td><strong>4.854</strong>***</td>
<td>-</td>
</tr>
<tr>
<td>Women actively participate in CF activities</td>
<td>-</td>
<td>3.361***</td>
<td><strong>3.194</strong>***</td>
<td>-</td>
</tr>
<tr>
<td>Members can examine finance</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td><strong>3.676</strong>***</td>
</tr>
</tbody>
</table>

**Usage:** evaluate performance, impact, driving/influence factors, causes of casualties, etc.
Tree models

- Classification and Regression Tree (CART)
  - Identify important indicators
  - Community size (i.e. minefield size, location)


Tree models

Classification and Regression Tree (CART)

Identify important indicators

Community size (i.e. minefield size, location)

Ways forward for MA R & D

- Data sharing to improve efficiency, effectiveness, adaptive response, resource mobilization
- Support the establishment of MA Research Network (national, regional and global)
- More collaborative research
- Support research grants
Thank you!!!