Research and Development in Mine Action: Finding the Ways Forward

12-14 November 2018, Siem Reap, Cambodia
Borei Angkor Resort and Spa

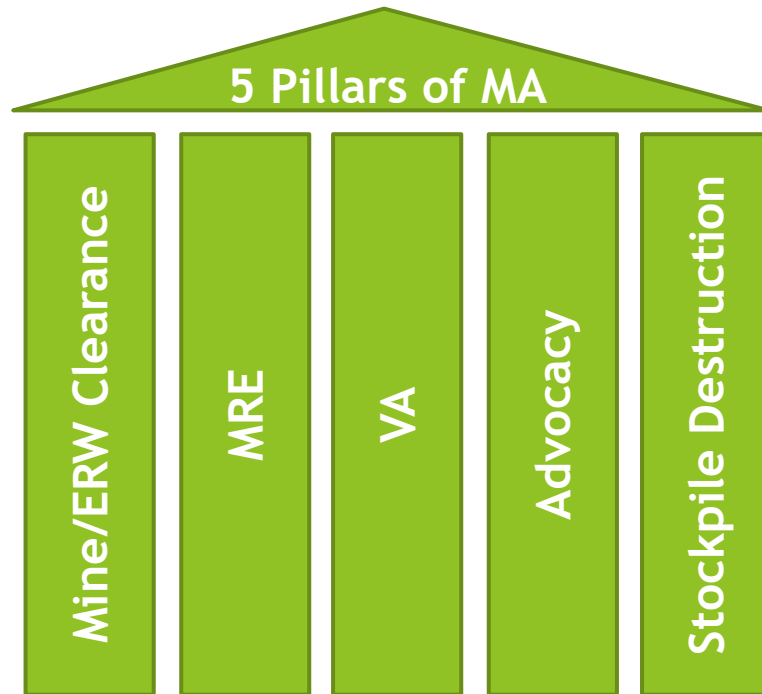**Ratha Seng, PhD**
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Mine Action in the Era of SDGs

5 Pillars of MA

- Mine/ERW Clearance
- MRE
- VA
- Advocacy
- Stockpile Destruction

- **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.

Have we been efficient and effective enough?

How can we better address the complexity? The multidimensional issues?

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

Evidence based policy and intervention?

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

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)

—— Direct link

········· Indirect link

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.

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Meta-Analysis: Lessons Learned, Success or Failure, impact

Evans et al. (2011). impact of fisheries co-management interventions in developing countries: 29 case studies, 52 indicators.
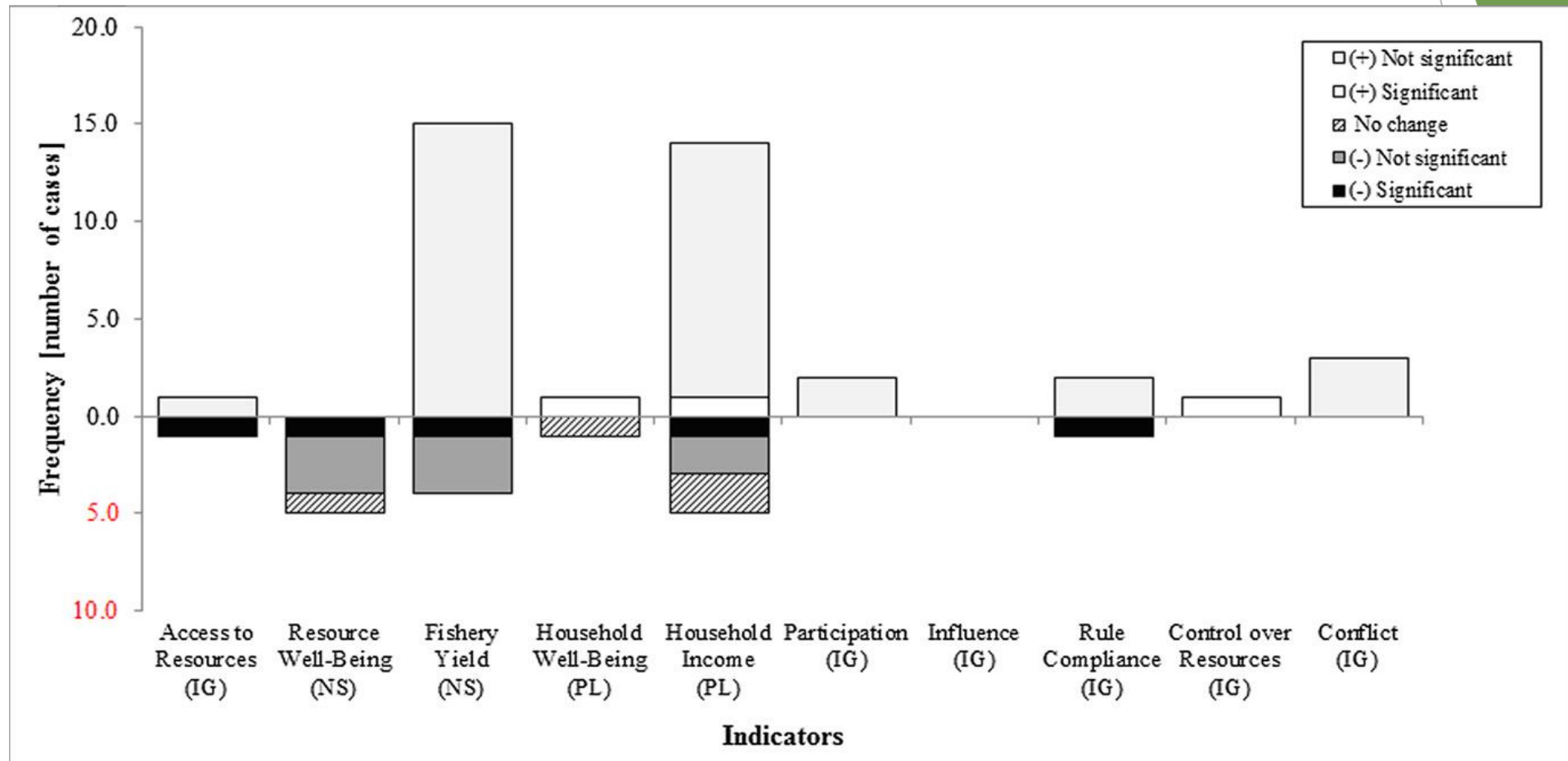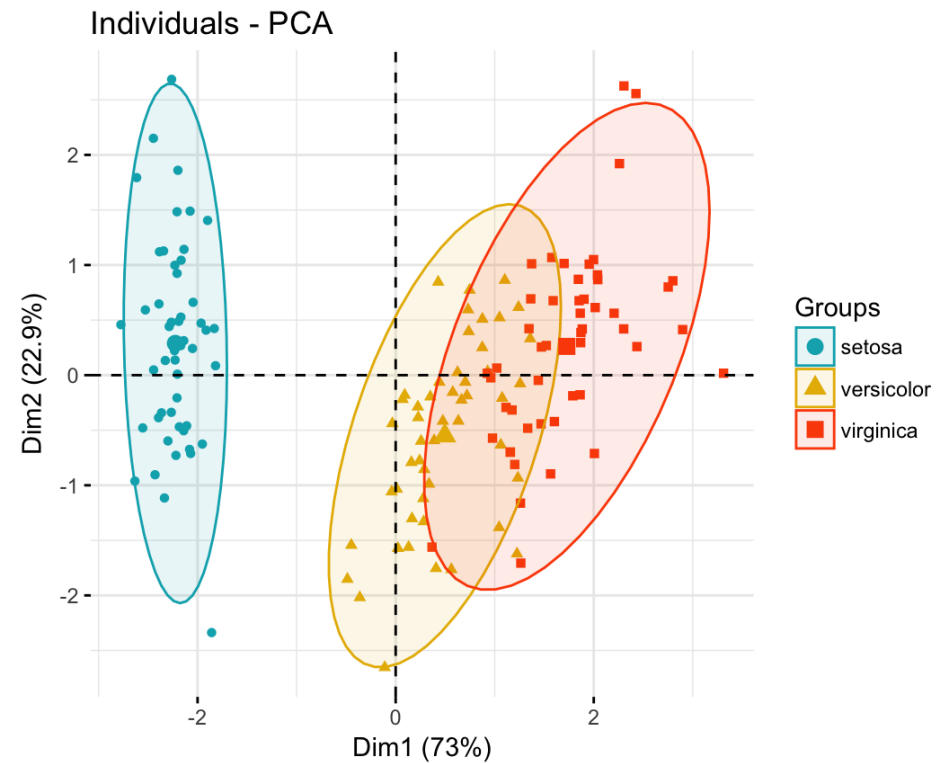

Data for the top outcome and process indicators excluding the Philippines cases
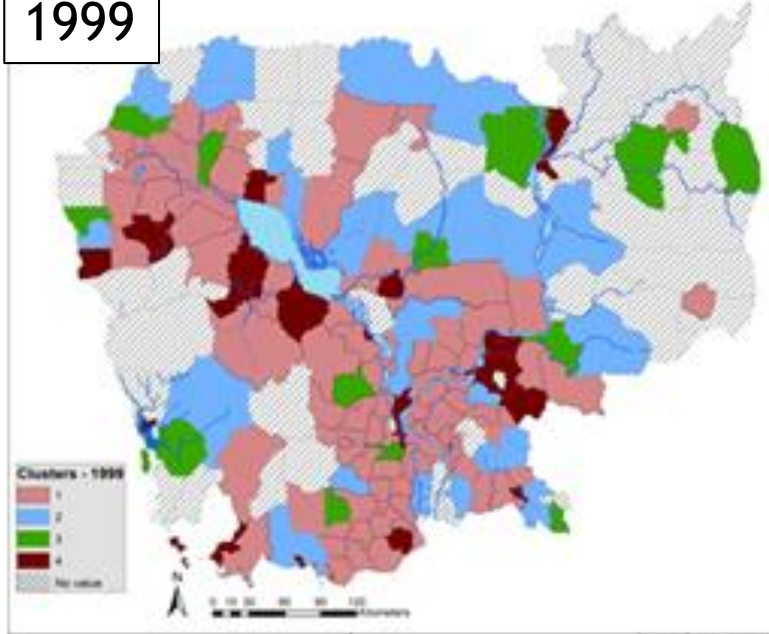
Multivariate analysis

▶ Principle Component Analysis (PCA)

▶ Non-Metric Multidimensional Scalling (NMDS)

▶ Multiple Coressponsdence Analysis (MCA)

Usage: patterns, temporal and spatial change.
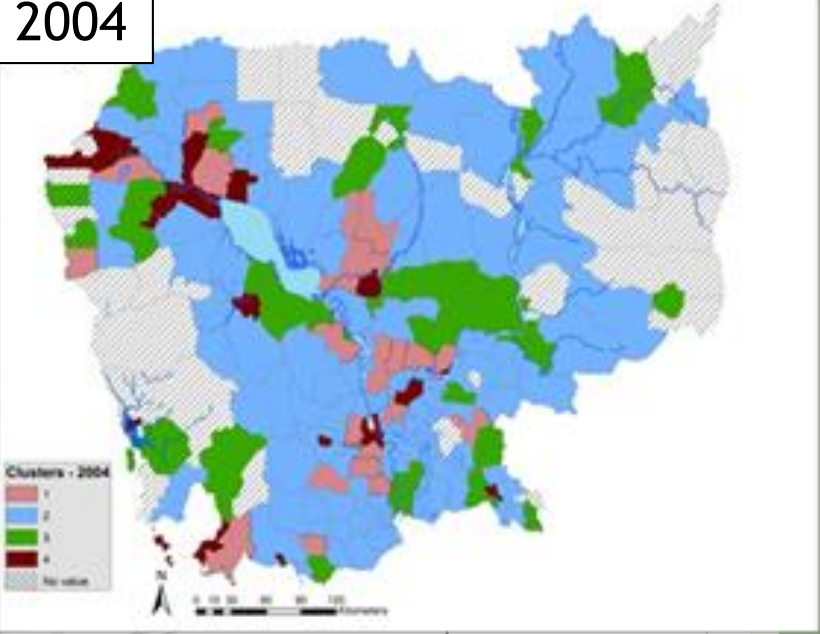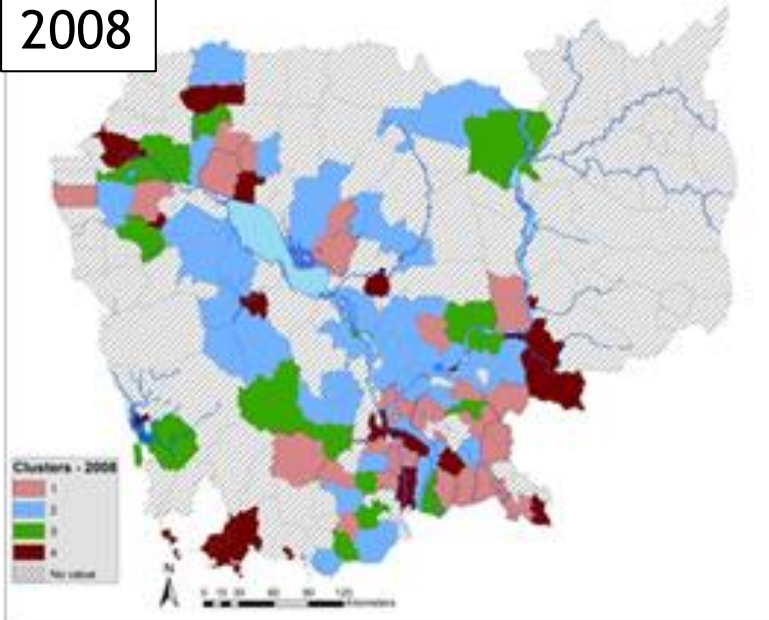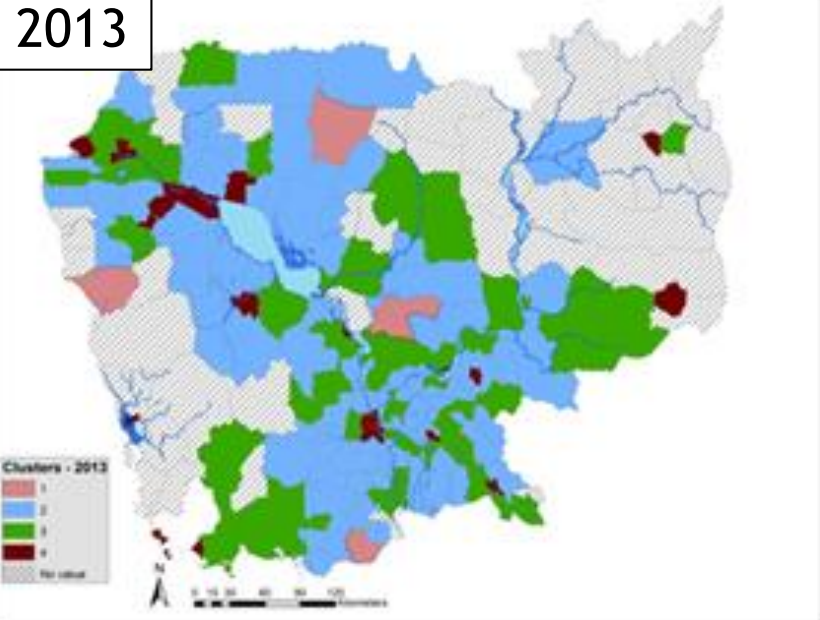
1999

2004

2008

2013

...sional S

13

04

Livestock

08

99

NMDS2

0.0

0

NMDS1

Clusters - 1999
1
2
3
4
No value

Clusters - 2004
1
2
3
4
No value

Clusters - 2008
1
2
3
4
No value

Clusters - 2013
1
2
3
4
No value

Predictive models

- ▶ Logistic regresion
- ▶ Multiple Linear Regression (MLR)

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

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)
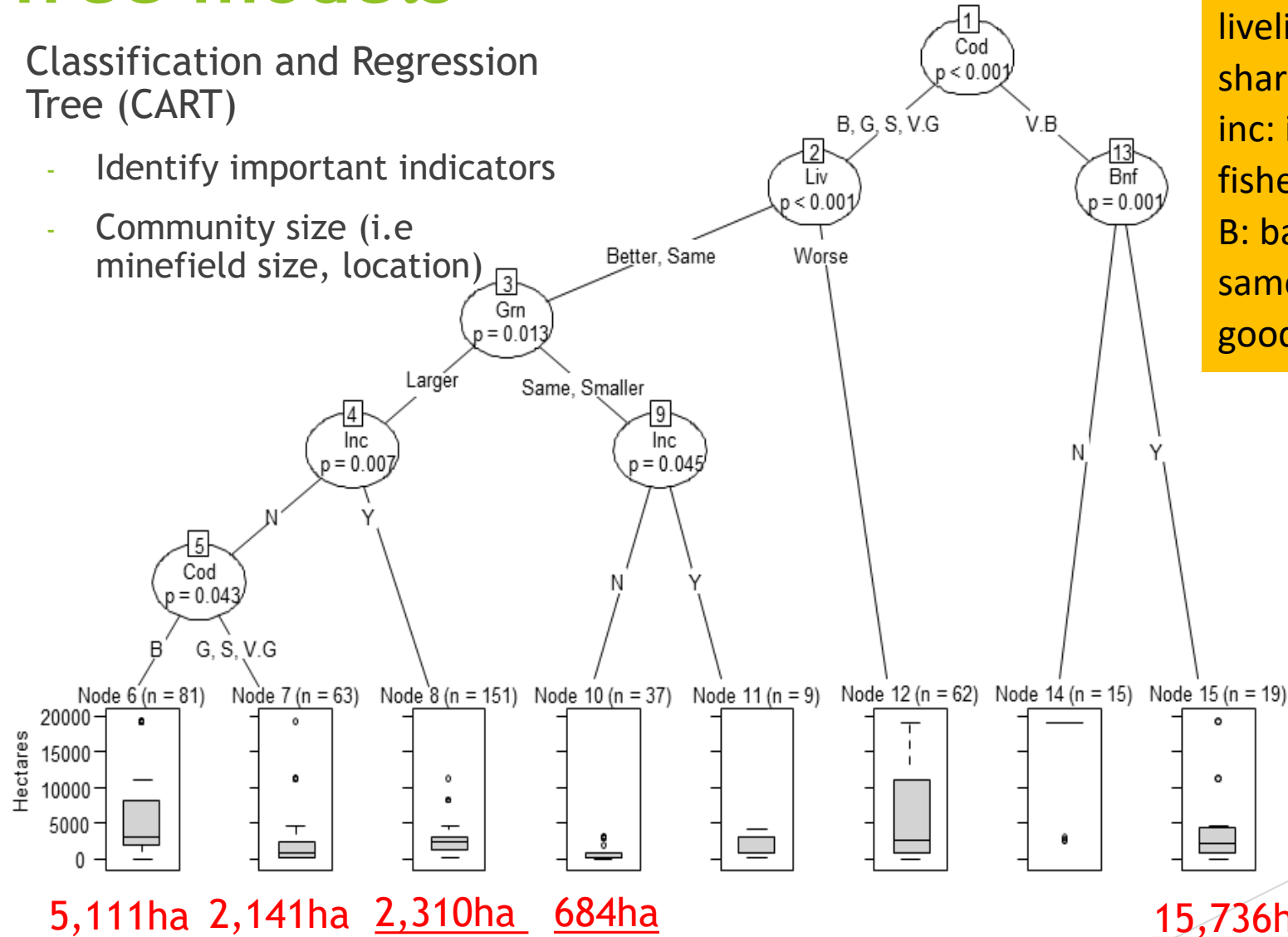
grn: fishing ground, liv: livelihood, bnf: shared benefits, inc: income, cod: fishery condition, B: bad, G: good, S: same, V.G: very good, N: no, Y: yes.

5,111ha   2,141ha   2,310ha   684ha   15,736ha

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!!!