

# HOW DO WE TRACK PROGRESS

*In pursuit of effectively managed and equitably governed marine and coastal areas*

**NORIEVILL ESPAÑA**

Understanding and Accelerating Actions on OECMs  
in the Marine and Coastal Areas of East Asian Seas  
Iloilo City, The Philippines  
14 - 16 August 2025

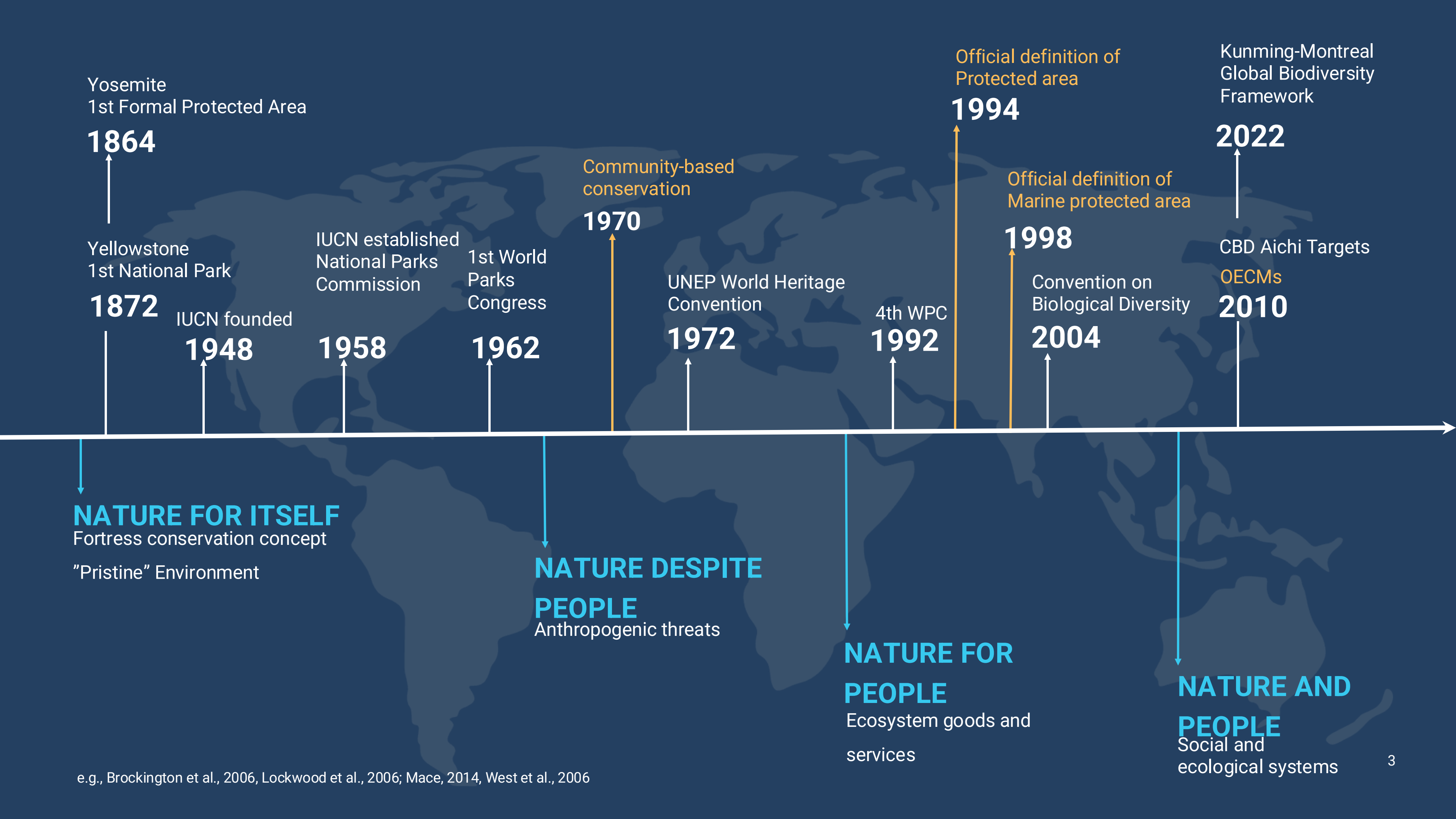
**UN**  **environment**  
programme

**COBSEA**  
COORDINATING BODY ON THE SEAS OF EAST ASIA



# OUTLINE

- The need for monitoring and evaluation
- Approaches and tools to conservation M&E
- What is meant when we talk about **EQUITY**?



e.g., Brockington et al., 2006, Lockwood et al., 2006; Mace, 2014, West et al., 2006

# WDPA PREVIEW

► **287,169; 16.43%**

Protected Areas

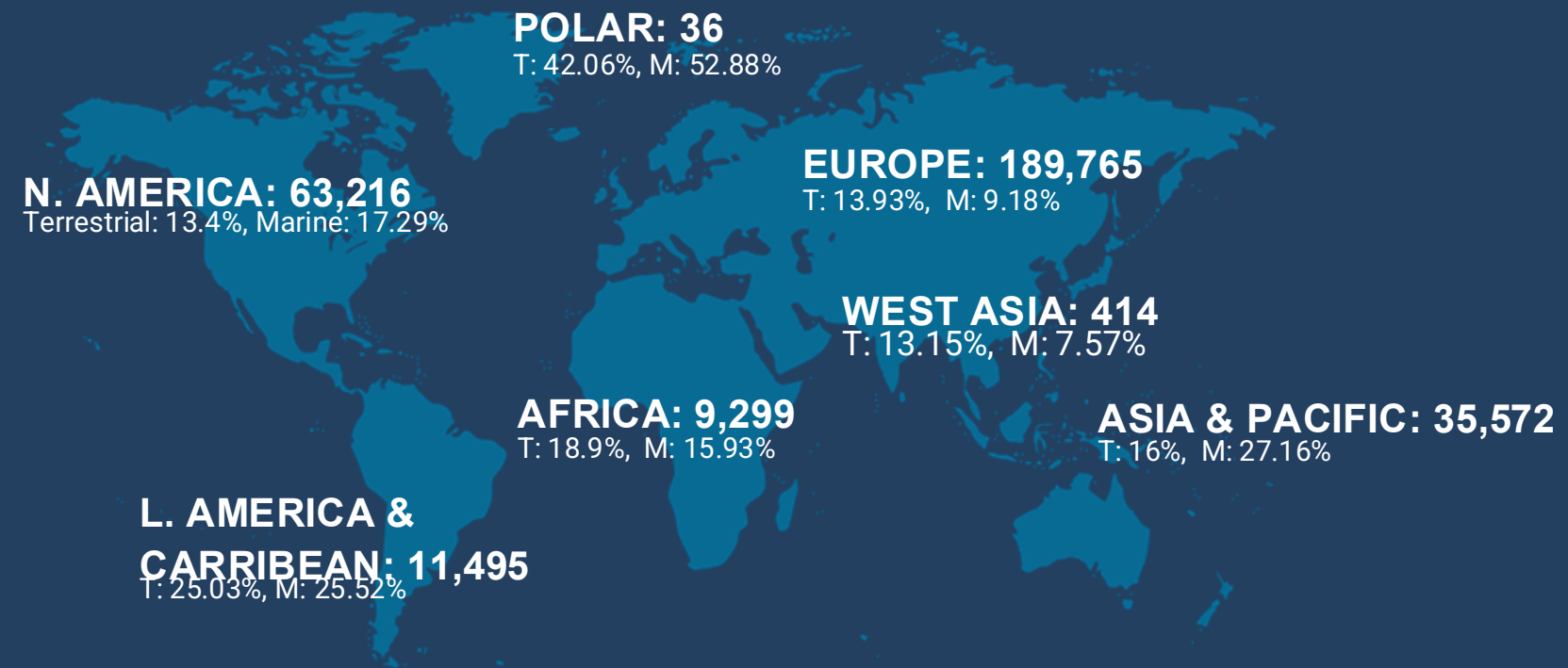
*As of August 2025*

► **6,374, 1.1%**

OECMs

► **16,898**

Marine Protected Areas



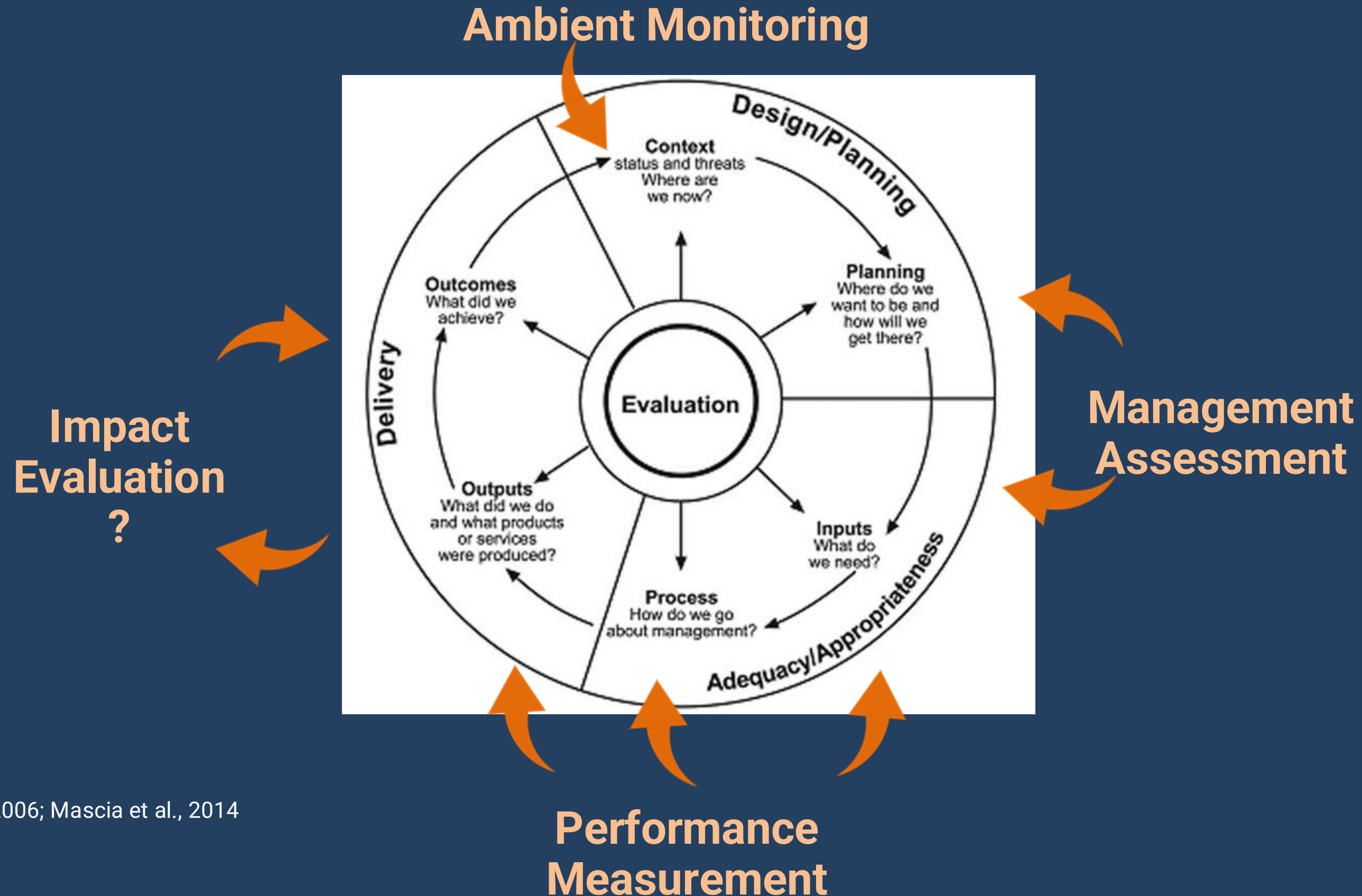
# Target 3 Indicators: **Where are we now?**

| Headline Indicator                           | Component Indicator                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Complementary Indicator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Coverage</b> of protected areas and OECMs | <ul style="list-style-type: none"> <li>Protected area <b>coverage</b> of Key Biodiversity Areas</li> <li>Protected Area Management Effectiveness (PAME)</li> <li>ProtConn</li> <li>Protected Area Connectedness Index (PARC-Connectedness)</li> <li>Red List of Ecosystems Connectivity Indicator (in development)</li> <li>The number of protected areas that have completed a site-level assessment of governance and equity (SAGE)</li> <li>Species Protection Index</li> </ul> | <ul style="list-style-type: none"> <li>Protected area downgrading, downsizing and (de)gazettement (PD)</li> <li>Status of Key Biodiversity Areas</li> <li>IUCN Green List of Protected and Conserved Areas</li> <li>Number of hectares of UNESCO designated sites (natural and mixed World Heritage sites and Biosphere Reserves)</li> <li>Protected area and OECM management effectiveness (MEPCA) indicator</li> <li>Protected Area Isolation Index (PAI)</li> <li>Protected Areas Network metric (ProNet)</li> <li><b>Extent</b> to which protected areas and other effective area based conservation measures (OECMs) cover Key Biodiversity Areas that are important for migratory species</li> <li>Coverage of Protected areas and OECMS and traditional territories (by governance type)</li> <li>Ramsar Management Effectiveness Tracking Tool (RMETT)</li> <li><b>Percentage</b> of biosphere reserves that have a positive conservation outcome and effective management</li> <li>Extent of indigenous peoples and local communities' lands that have some form of recognition</li> <li>Species Protection Index</li> <li><b>Number</b> of countries implementing national legislation, policies or other measures regarding free, prior and informed consent related to conservation</li> <li>Red List of Ecosystems</li> <li><b>Proportion</b> of terrestrial, freshwater and marine ecological regions which are conserved by protected areas or other effective area-based conservation measures</li> </ul> |

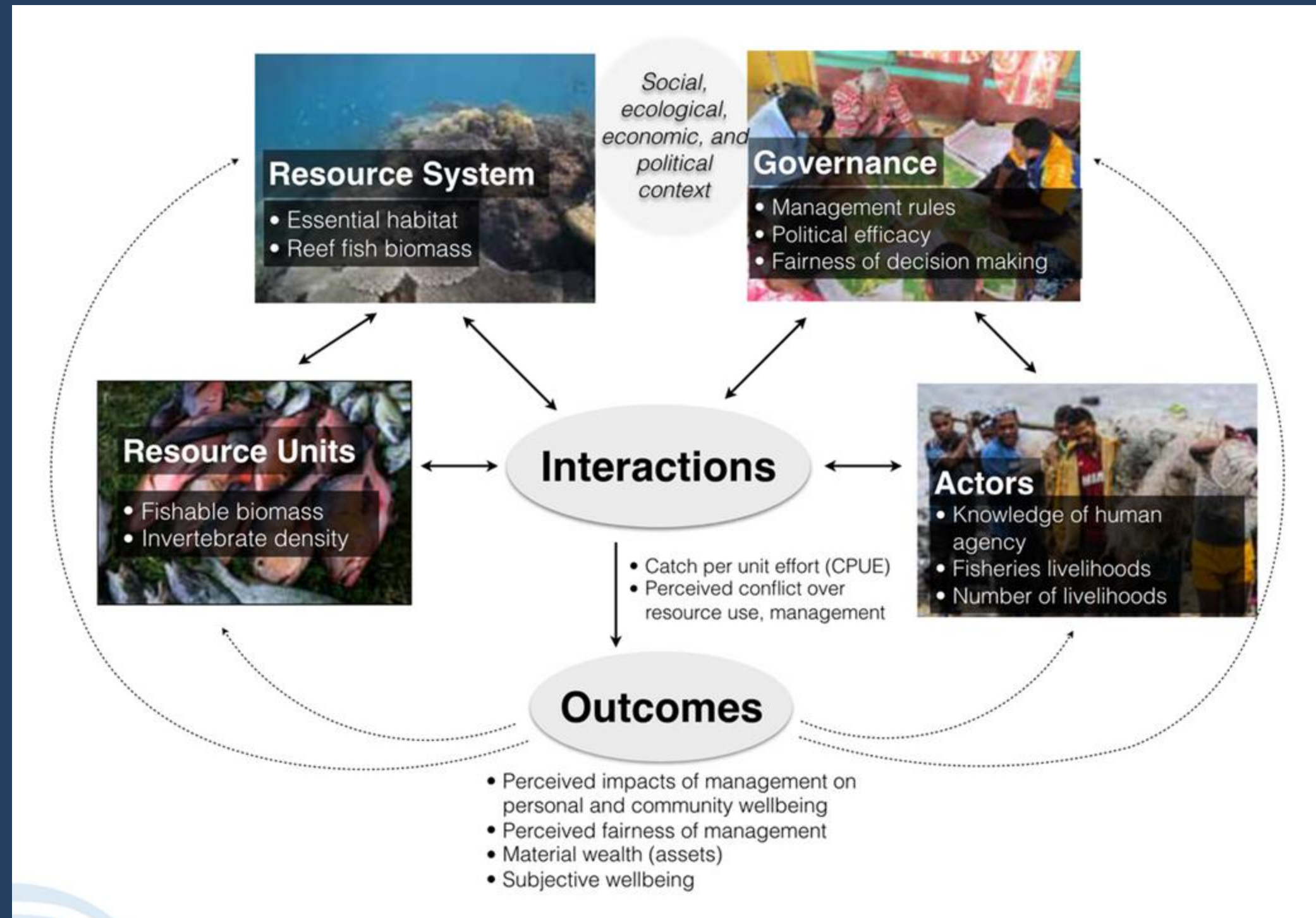
# Tracking Progress: **CHALLENGES & OPPORTUNITIES**



# Adaptive Management Framework



# MPA AS SOCIAL-ECOLOGICAL SYSTEM



**Table 3.** Ecological domains, attributes, and illustrative indicators of the ecological impacts of marine protected areas (MPAs)<sup>113–115</sup>

| Domain     | Attribute               | Illustrative indicator                               |
|------------|-------------------------|------------------------------------------------------|
| Population | Numeric density         | Count of individuals per unit area                   |
|            | Biomass                 | Abundance multiplied by mean weight                  |
|            | Age structure           | Frequency distributions of age classes               |
|            | Recruitment             | Count of larvae per unit area                        |
| Community  | Species richness        | Number of species per survey                         |
|            | Species diversity       | Simpson diversity index                              |
|            | Trophic structure       | Distribution of trophic levels in species assemblage |
|            | Functional redundancy   | Number of species within functional groups           |
| Ecosystem  | Productivity            | Fishery production                                   |
|            | Habitat characteristics | Extent                                               |
|            | Coastal processes       | Sediment cycling                                     |
|            | Herbivory               | Grazing rates                                        |

**Table 4.** Ecosystem service domains, attributes, and illustrative indicators of the ecosystem service impacts of marine protected areas (MPAs)<sup>120–122</sup>

| Domain       | Attribute            | Illustrative indicator    |
|--------------|----------------------|---------------------------|
| Provisioning | Fisheries            | Fisheries catch           |
|              | Materials            | Volume mined              |
| Supporting   | Biodiversity         | Number of species         |
| Regulatory   | Carbon sequestration | Mangrove biomass          |
| Cultural     | Tourism              | Annual value of tourism   |
|              | Recreation           | Scuba diving annual value |
|              | Existence values     | Nonuse existence value    |

**Table 5.** Social domains, attributes, and illustrative indicators of the impacts of marine protected areas

| Domain                | Attribute               | Illustrative indicator                                                                                                                    |
|-----------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Economic well-being   | Occupation              | Primary occupation                                                                                                                        |
|                       | Economic status         | Household material assets index<br>Trend in economic status                                                                               |
|                       | Fishing characteristics | Primary fishing technique<br>Household dependence on marine protein<br>Economic dependence on marine fisheries                            |
| Health                | Food security           | Household food security index<br>Child food security index<br>Catch per unit effort                                                       |
|                       | Birth rate              | Birth rate<br>Adolescent birth rate                                                                                                       |
|                       | Mortality               | Infant mortality rate<br>Under-five mortality rate<br>Adult mortality rate                                                                |
| Political empowerment | Morbidity               | Household disease rate<br>Household disease burden                                                                                        |
|                       | Resource rights         | Household marine tenure index                                                                                                             |
|                       | Community organization  | Participation in community groups<br>Financial contribution to marine community groups<br>Female participation in marine community groups |
| Education             | Political engagement    | Voting rates                                                                                                                              |
|                       | Formal education        | Adult literacy rates<br>School enrollment rates                                                                                           |
|                       | Environmental education | Awareness of threats to marine environment<br>Awareness of marine conservation actions                                                    |
| Culture               | Place attachment        | Mean place attachment                                                                                                                     |
|                       | Social conflict         | Trends in social conflict                                                                                                                 |

Note: All indicators may be disaggregated by demographic characteristics (e.g., age, gender, wealth, education, and class) to explore the distributive impacts of MPAs.<sup>42,47,118,130</sup>

# Contemporary Evaluation Tools

|                                     | METT, RAPPAM, IMET                                                                                                | MEAT/NEAT                                                                                   | SEAT                                                                           | The MPA Guide                                                                           |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| M&E Approach                        | Management Assmt.<br>Needs Evaluation                                                                             | Performance Meas.<br>Progress Evaluation                                                    | Performance Meas.<br>Progress Evaluation                                       | Impact Evaluation                                                                       |
| What is measured?<br>Indicators     | Iterative<br>management cycle<br>Intervention inputs<br>(e.g., funding,<br>personnel), activities,<br>and outputs | Management<br>Focus/Programs:<br>(e.g., enforcement,<br>implementation, and<br>maintenance) | Socio-Economic<br>benefits from MPAs<br>Human, Financial and<br>Social Capital | Link between<br>governance (stage or<br>level), enabling<br>conditions, and<br>outcomes |
| Who uses this tool?                 | NGAs, Project<br>management units<br>Donors                                                                       | NGAs, LGUs<br>Community-based<br>organizations<br>NGOs, Academe                             | MPA managers and<br>organizations with<br>direct influence on<br>MPAs          | Academe<br>National government<br>NGOs                                                  |
| How is the tool used<br>or applied? | Self-administered<br>Expert judgement                                                                             | Participatory, FGD<br>management body<br>Consensus                                          | Participatory, FGD<br>management body<br>Consensus                             | Self-administered<br>Expert judgement                                                   |

Mascia et al., 2014; MSN, 2010; Rosales, 2018; Grorud-Colvert, 2021; Franks, 2023

# EFFECTIVE

- What is done in pursuit of given objectives
- The means and actions to achieve such objectives

**Management**

**Governance**

- Who holds power, authority and responsibility
- Who decides what the objectives are
- Who is held accountable

# EQUITY

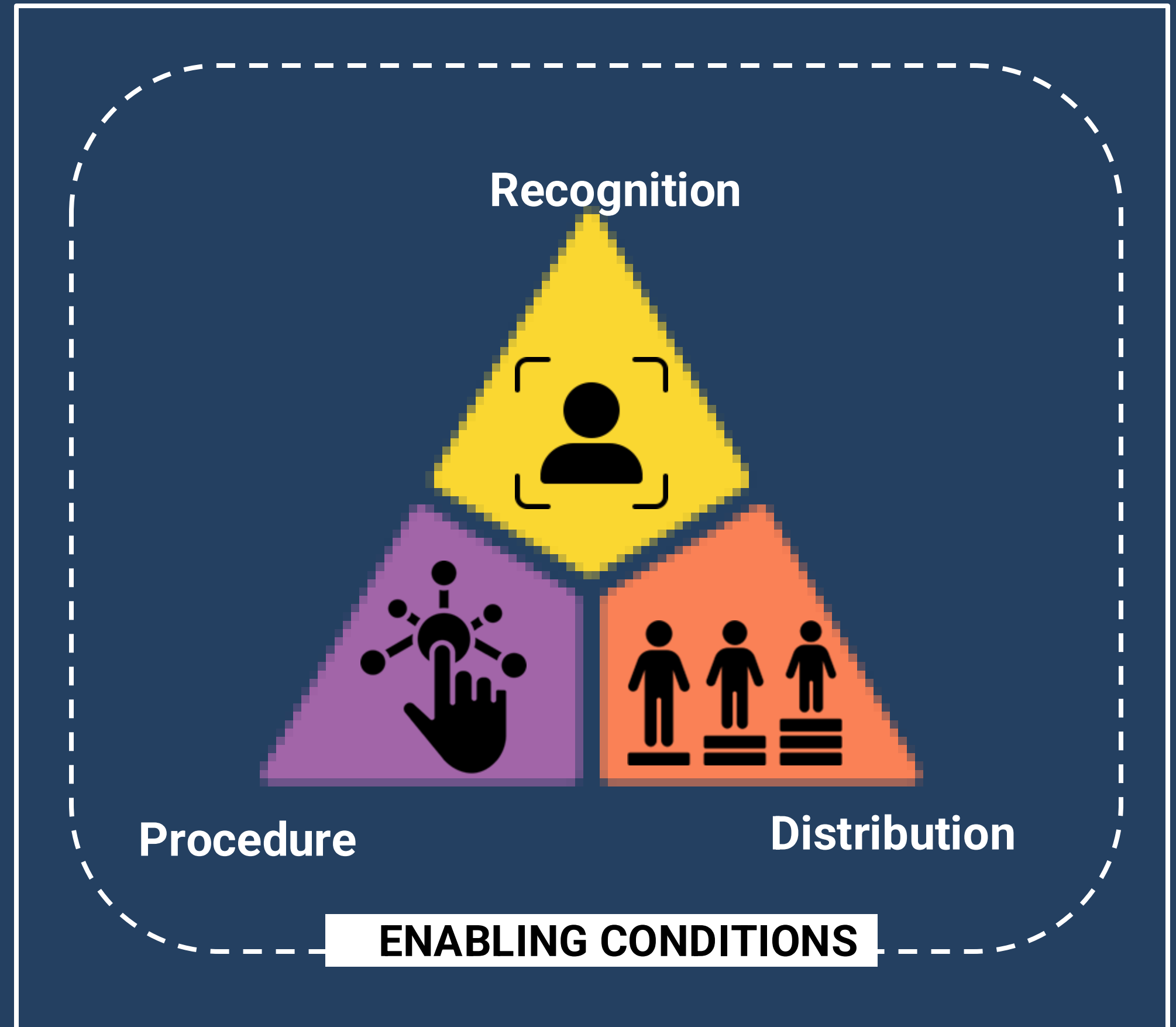
# Contemporary Evaluation Tools

|                                     | METT, RAPPAM, IMET                                                                                                | MEAT/NEAT                                                                                   | SEAT                                                                           | The MPA Guide                                                                           | SAGE                                                                |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| M&E Approach                        | Management Assmt.<br>Needs Evaluation                                                                             | Performance Meas.<br>Progress Evaluation                                                    | Performance Meas.<br>Progress Evaluation                                       | Impact Evaluation                                                                       | Performance Meas.<br>Progress Evaluation                            |
| What is measured?<br>Indicators     | Iterative<br>management cycle<br>Intervention inputs<br>(e.g., funding,<br>personnel), activities,<br>and outputs | Management<br>Focus/Programs:<br>(e.g., enforcement,<br>implementation, and<br>maintenance) | Socio-Economic<br>benefits from MPAs<br>Human, Financial and<br>Social Capital | Link between<br>governance (stage or<br>level), enabling<br>conditions, and<br>outcomes | Dimensions of Equity<br>Quality of<br>Governance<br>Governance Type |
| Who uses this tool?                 | NGAs, Project<br>management units<br>Donors                                                                       | NGAs, LGUs<br>Community-based<br>organizations<br>NGOs, Academe                             | MPA managers and<br>organizations with<br>direct influence on<br>MPAs          | Academe<br>National government<br>NGOs                                                  | Rightsholders<br>All relevant actors                                |
| How is the tool used<br>or applied? | Self-administered<br>Expert judgement                                                                             | Participatory, FGD<br>management body<br>Consensus                                          | Participatory, FGD<br>management body<br>Consensus                             | Self-administered<br>Expert judgement                                                   | Participatory, FGD<br>actor groups, rights<br>holders               |

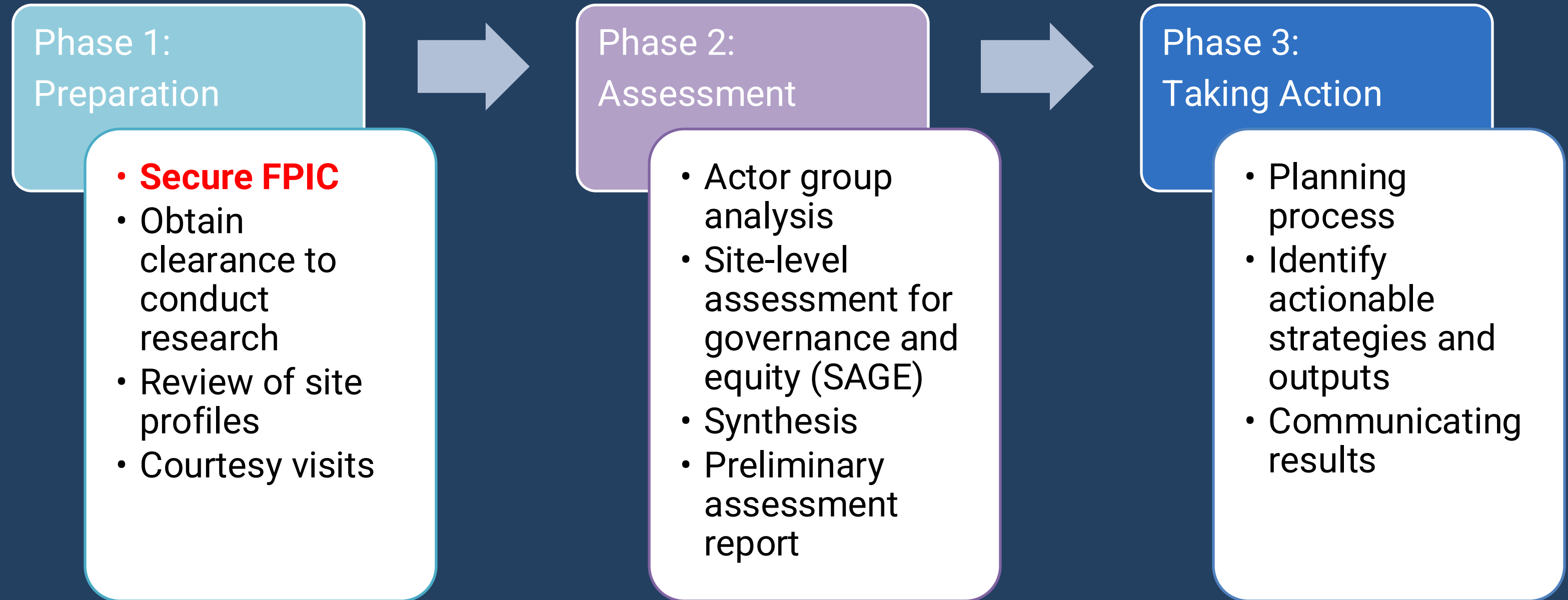
# What I talk when I talk about **EQUITY**

- **FAIR** and **JUST** conditions and treatment of people
- Development, application and outcomes associated with an intervention (e.g., law, policy)
- A societal ideal and a matter of governance

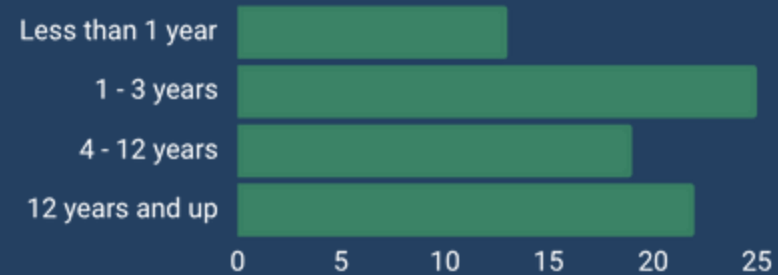
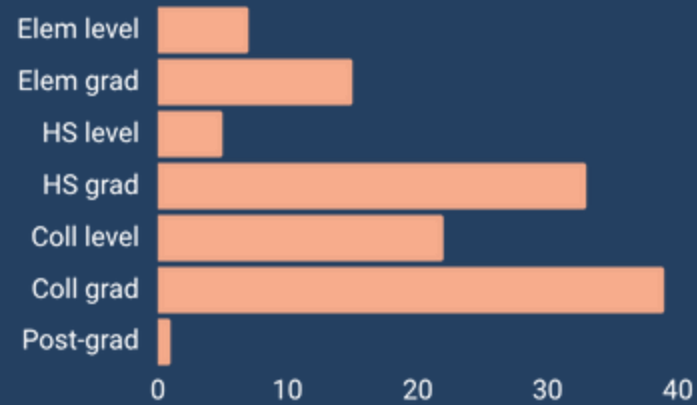
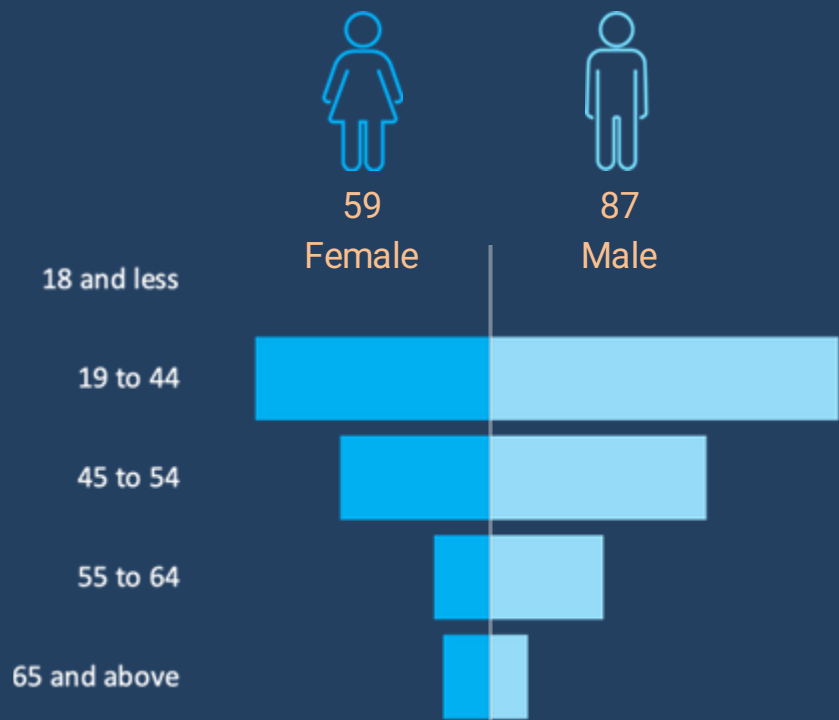
**Equity  $\neq$  Equal**  
**Effective  $\neq$  Equitable**



# The SAGE Methodology



# Phase 1: Preparation



## Mantalip Reef MR

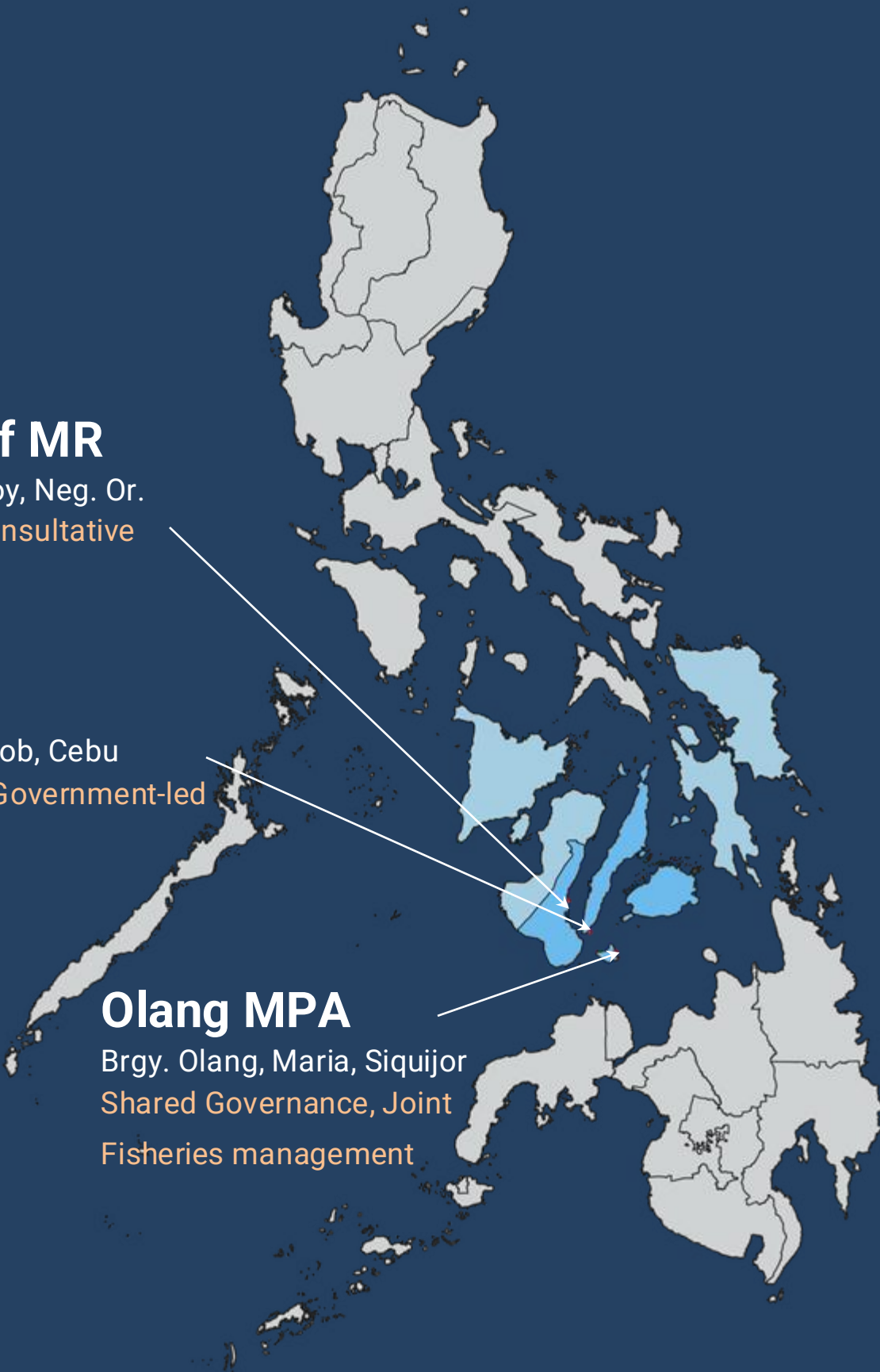
Brgy. Tinaogan, Bindoy, Neg. Or.  
State Governance, Consultative  
Tourism

## Sumilon IFS

Brgy. Bangcogon, Oslob, Cebu  
Shared Governance, Government-led  
Tourism

## Olang MPA

Brgy. Olang, Maria, Siquijor  
Shared Governance, Joint  
Fisheries management



18

Decentralized Assessments

146

Total Respondents

7-10

Months

# Phase 2: Assessment

## Equitable Governance principles for PCA

|                      |                                                                                          |
|----------------------|------------------------------------------------------------------------------------------|
| Equity: recognition  | 1. <b>Respect for resource rights and human rights</b> of community members              |
|                      | 2. <b>Respect for all relevant actors</b> and their knowledge, values and institutions   |
| Equity: procedure    | 3. <b>Effective participation</b> of all relevant actors in decision making              |
|                      | 4. <b>Transparency, information sharing and accountability</b> for actions and inactions |
|                      | 5. <b>Access to justice</b> including effective dispute resolution processes             |
|                      | 6. <b>Fair and effective law enforcement</b>                                             |
| Equity: distribution | 7. <b>Effective mitigation of negative impacts</b> on community members                  |
|                      | 8. <b>Equitable sharing of benefits</b> among relevant actors                            |
| Other governance     | 9. <b>Achievement of conservation and other objectives</b>                               |
|                      | 10. <b>Effective coordination and collaboration</b> between actors, sectors and levels   |



## STRENGTHS OF SAGE

- Comprehensive framing of governance and equity
- Participatory approach
- Excel-based data analysis
- Adaptability

## CHALLENGES AND LIMITATIONS

- Some indicators require additional translation or facilitation
- Sessions could be lengthy given the number of indicators

# In pursuit of a comprehensive M&E System



Transdisciplinary approach



Recognize dynamic social and ecological interactions



Adaptability and Practicality



Enabling conditions i.e., policy, funding, capacity-development support



Common currency of outcomes

# THANK YOU FOR YOUR ATTENTION!

For questions & concerns

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Environmental  
Sustainability  
Research Centre



**Rotary**

