

Selected highlights on fisheries rebuilding

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Outline

1. Rebuilding objectives
2. Rebuilding strategies
3. Lessons learned



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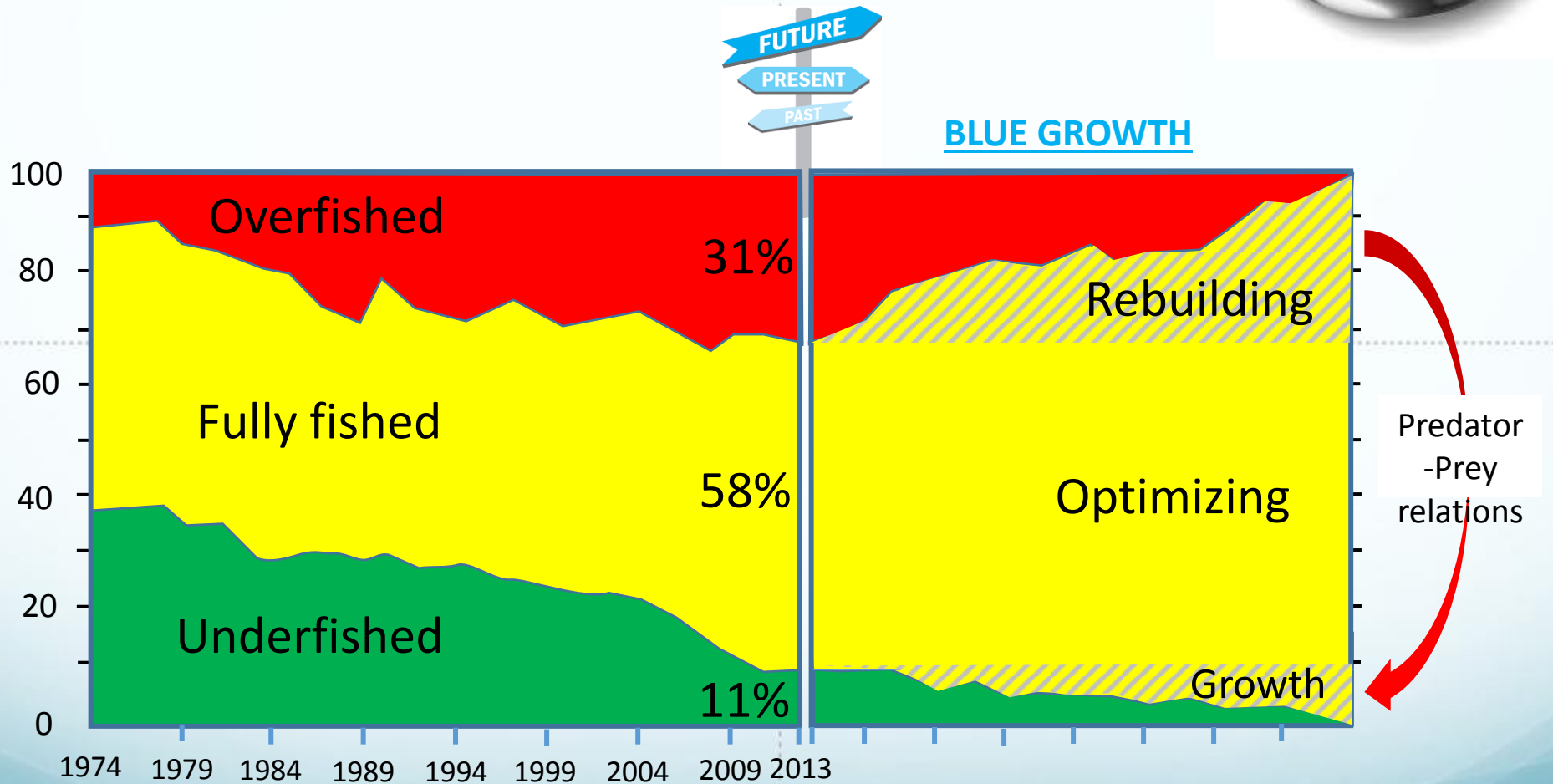
1. Rebuilding objectives



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Where do we want to go?



Rebuilding what?



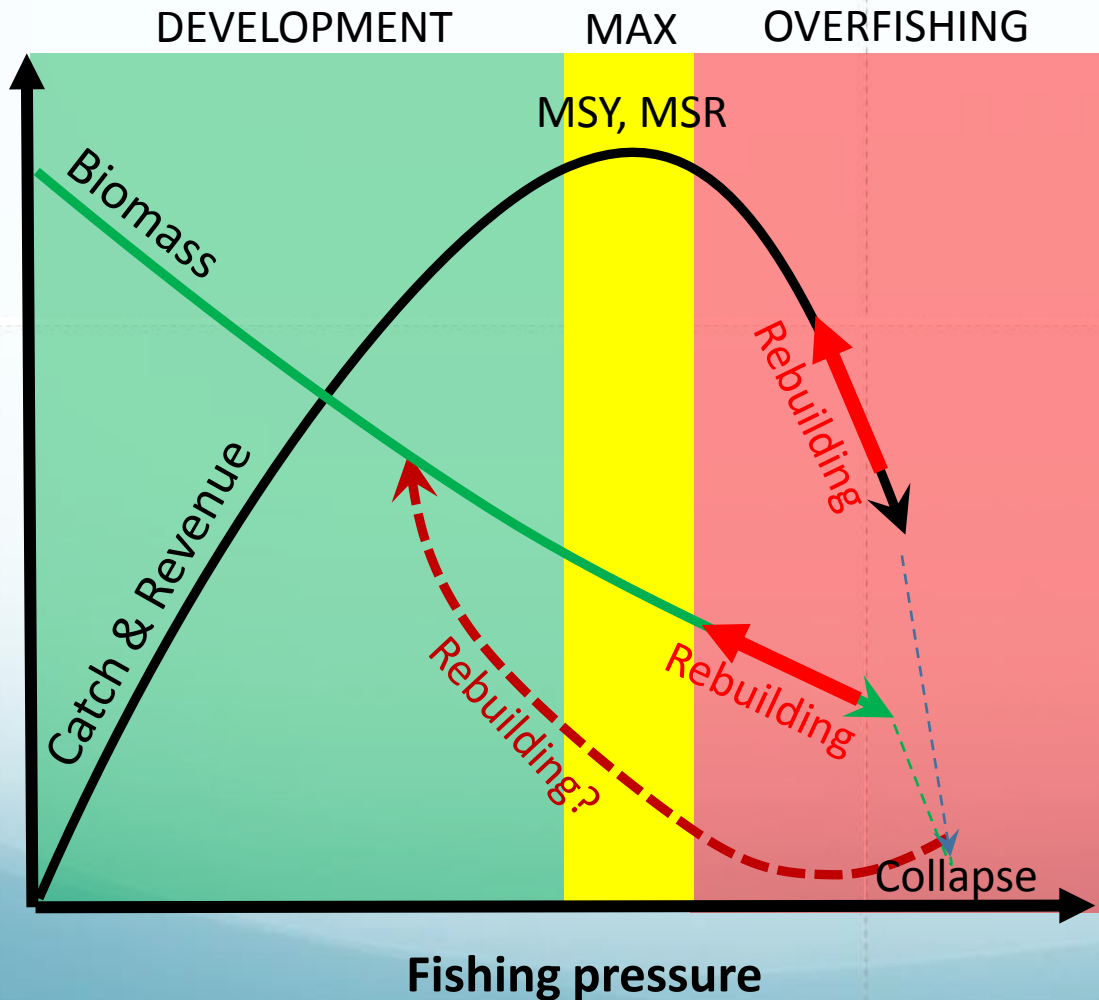
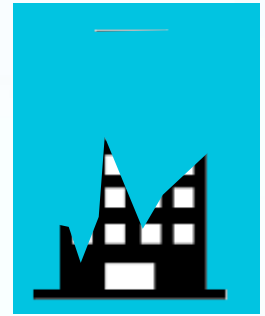
2. Rebuilding strategies



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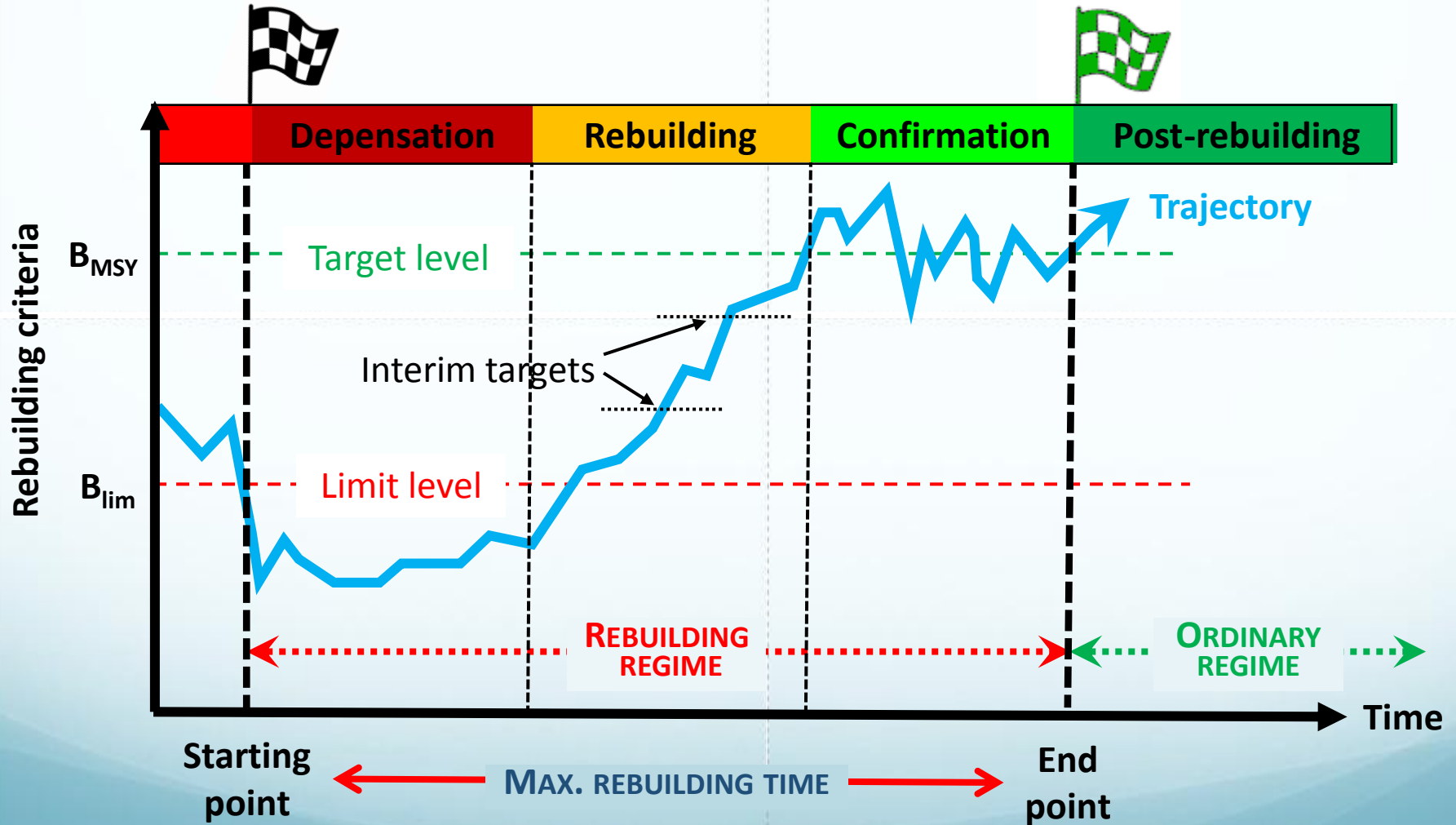
What is rebuilding?



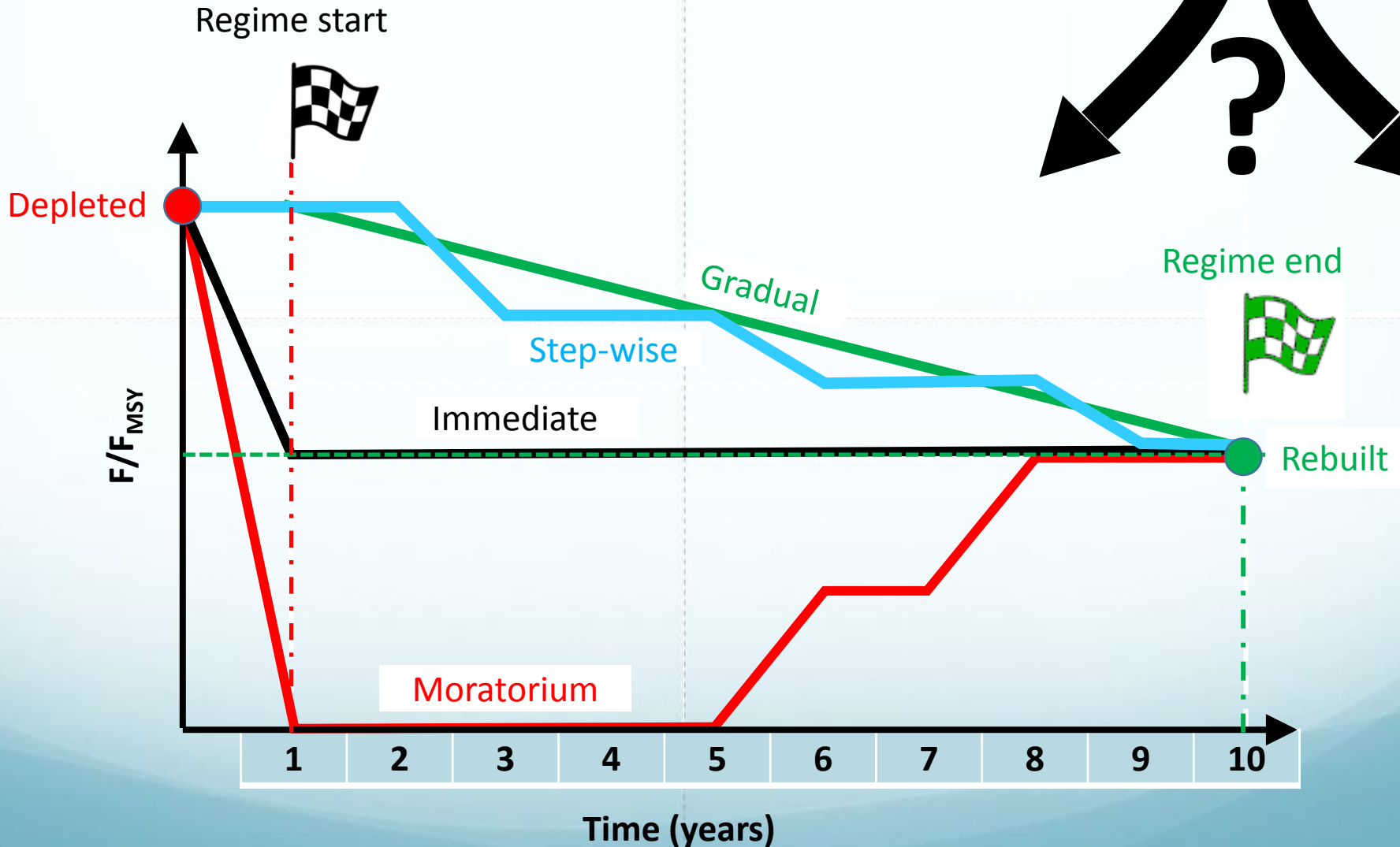
SUCCESS FACTORS

- Depletion level
- Trophic relations
- Natural oscillations
- Env. degradation
- Climate change
- Sector resilience
 - *Communities, fleets*
 - *Processing system*
 - *Market (consumers)*
- Investment

Rebuilding trajectory?



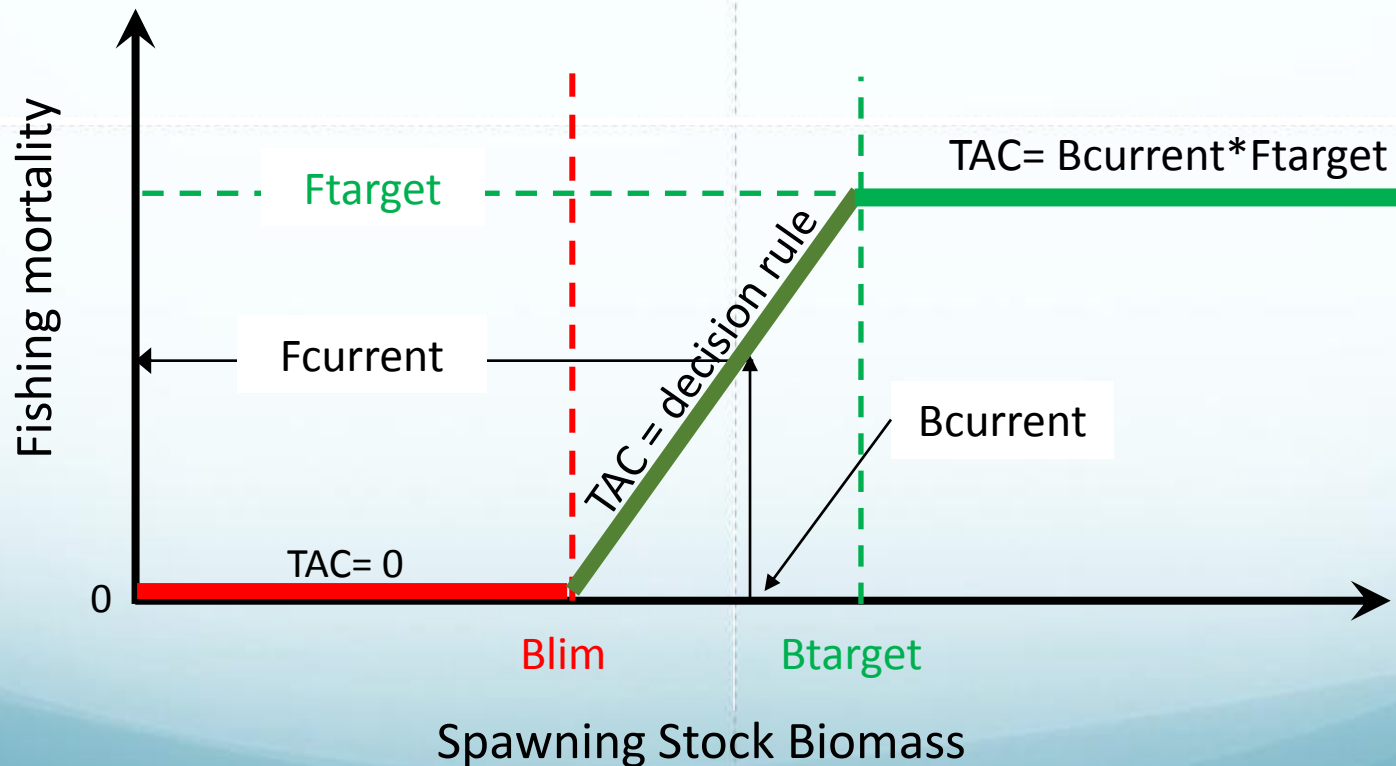
Alternative trajectories?



Rebuilding decision rule?



Decision rule: $F = F_{\text{target}} * [(B_{\text{current}} - B_{\text{lim}})/(B_{\text{target}} - B_{\text{lim}})]$



3. Lessons learned



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Human dimensions



- **Balancing:** stocks & industry needs
- **Participation:** effective empowerment
- **Communication:** essential to trust, buy-in and compliance
- **Safety nets:** vulnerable households, training, credit
- **Livelihoods:** alternatives, transitional support
- **Equity:** in costs & benefits; within and between generations
- **Market:** to be kept open... if possible
- **Community resilience:** Increase it
- **Use rights:** create, reinforce community-based rights
- **Self-innovation:** foster responsibility, incentives
- **PPP:** useful if equitable

Strategic questions

- **State:** where do we start from?
- **Law:** fisheries & conservation Acts
- **Institutions:** coordination
- **Scale:** stock, assemblage, sector/EEZ?
- **Objectives:** baselines, trade-offs
- **Costs/benefit:** Triple bottom line
- **Trajectory:** transition, interim targets
- **Risk management:** resources; people
- **Re-opening protocol:** pressures
- **Post-rebuilding strategy:** sliding back
- **Financing:**



Financing?



1. COMPENSATIONS



Fleet reduction: 2 million vessels

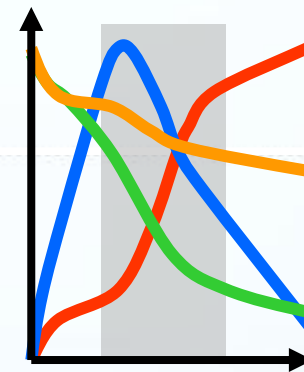


Safety nets: 100 million people

2. CAPACITY-BUILDING



Data collection



Assessments

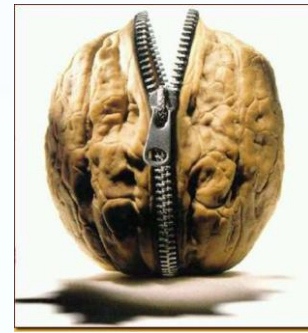


Institutions



Enforcement

In a nutshell!

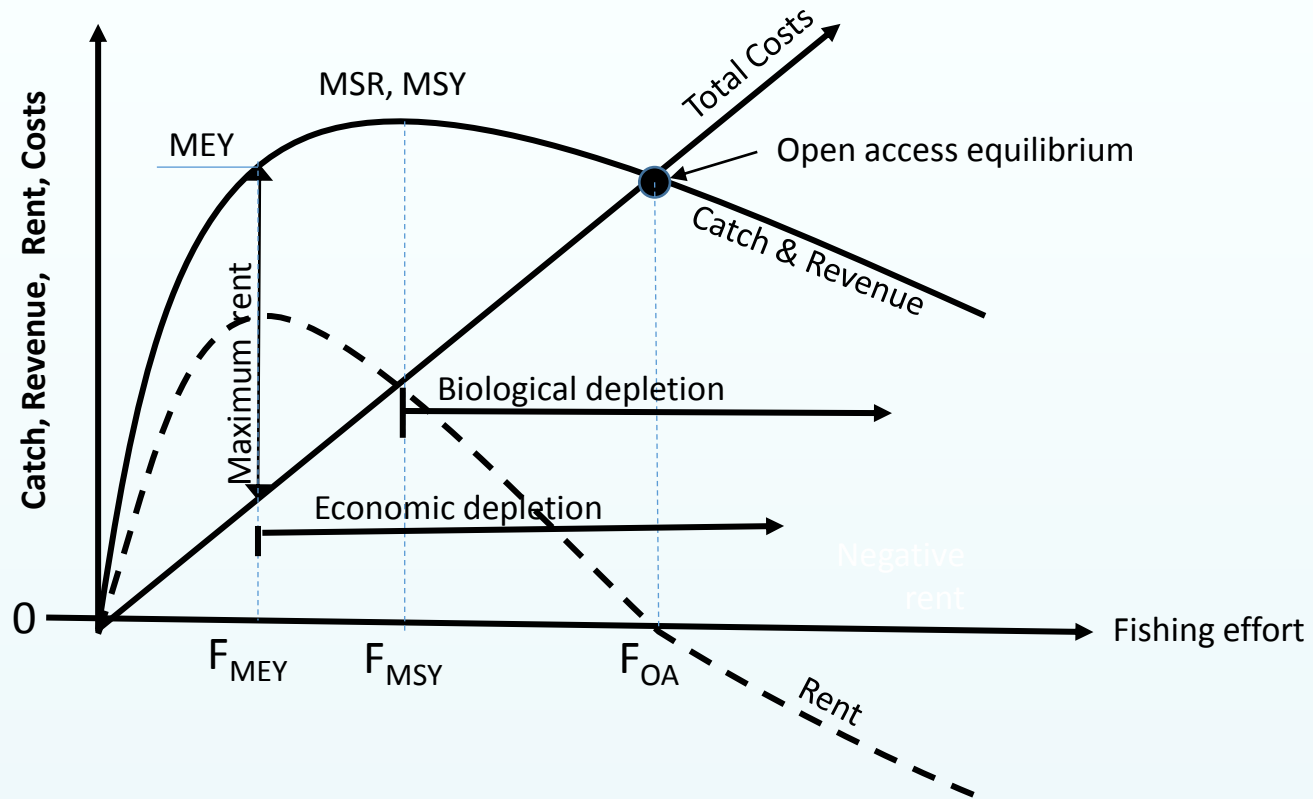


- Deep-depletion leads to slow rebuilding
- The fishing strategy during rebuilding is essential
- Destructive practices must be effectively banned
- The best strategy & pathway can only be defined locally
- Rebuilding is a multidisciplinary endeavor
- Monitoring and communicating progress improve transparency
- Specific legislation provides the foundations
- Focused policies and guidelines provide the direction
- Coherence across legislative and policy frames is essential
- Clear action strategies & triggers build understanding and trust
- Stakeholder involvement from the onset is key for success
- Transition measures improve buy-in and success
- Distributional issues are major challenges and fishing rights may help
- Early consideration of economics increases probability of success.

FAO is developing a comprehensive review and collecting case studies on the subject as a basis for technical guidelines.

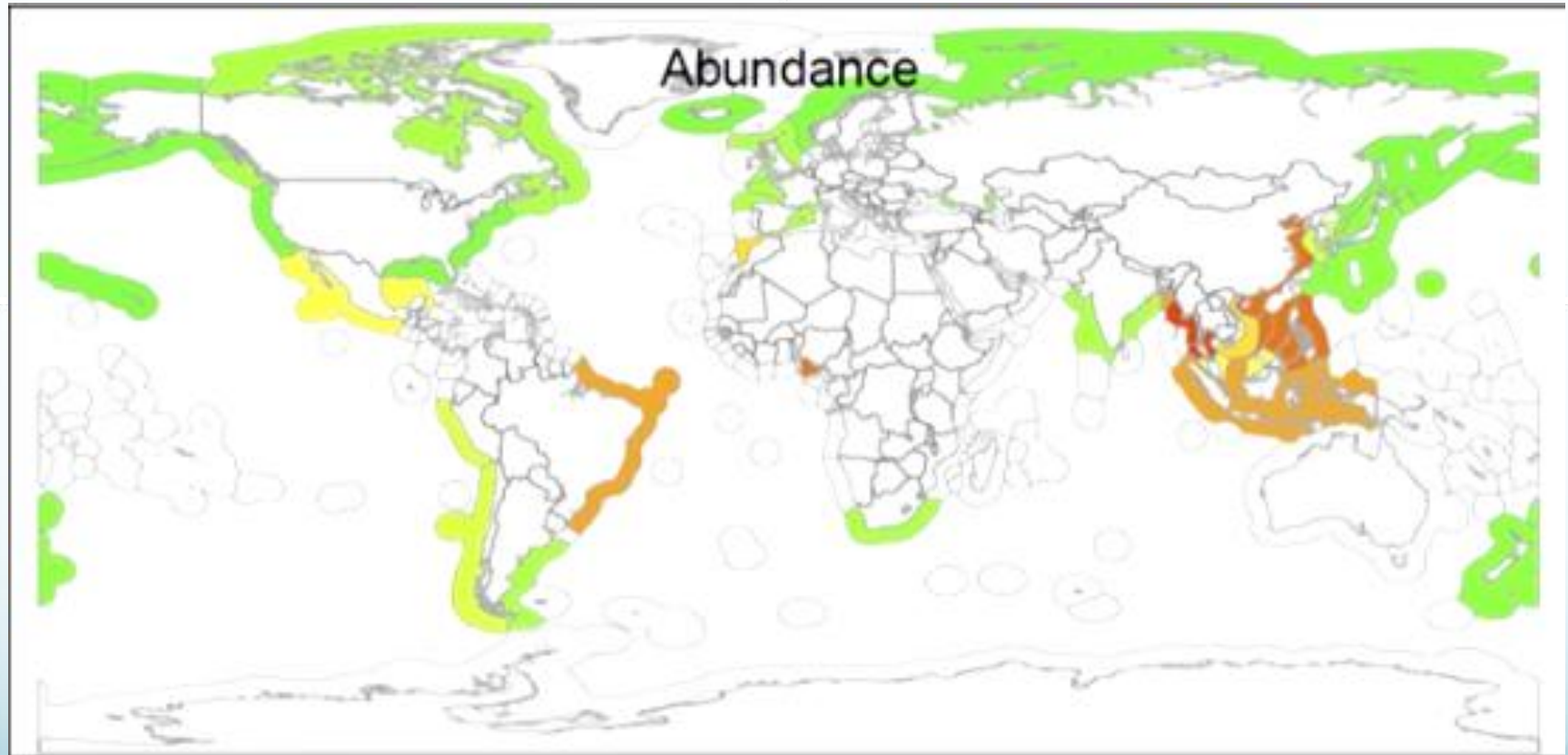
THANK YOU FOR YOUR ATTENTION





To re-insert in
the book

Abundance at world level



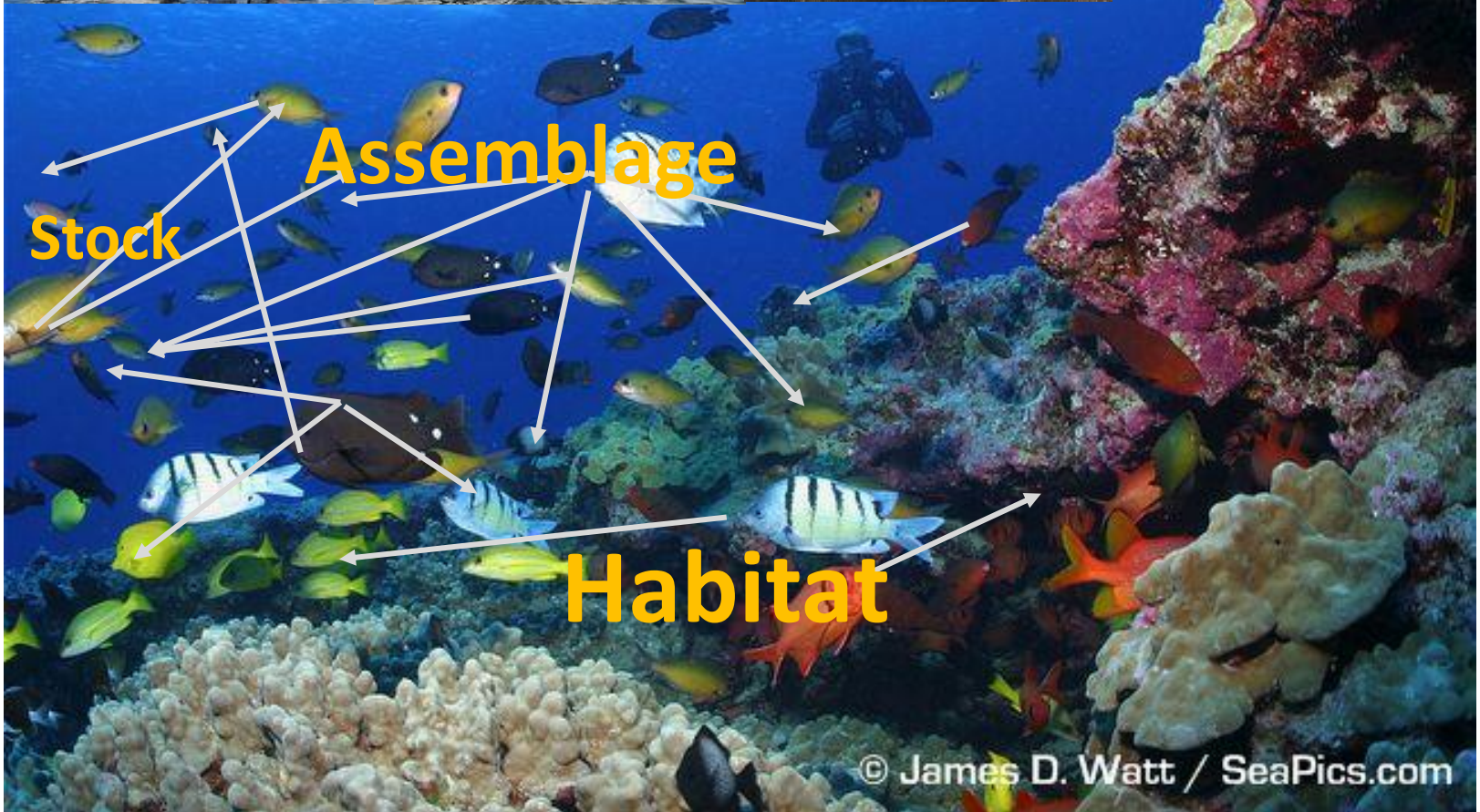
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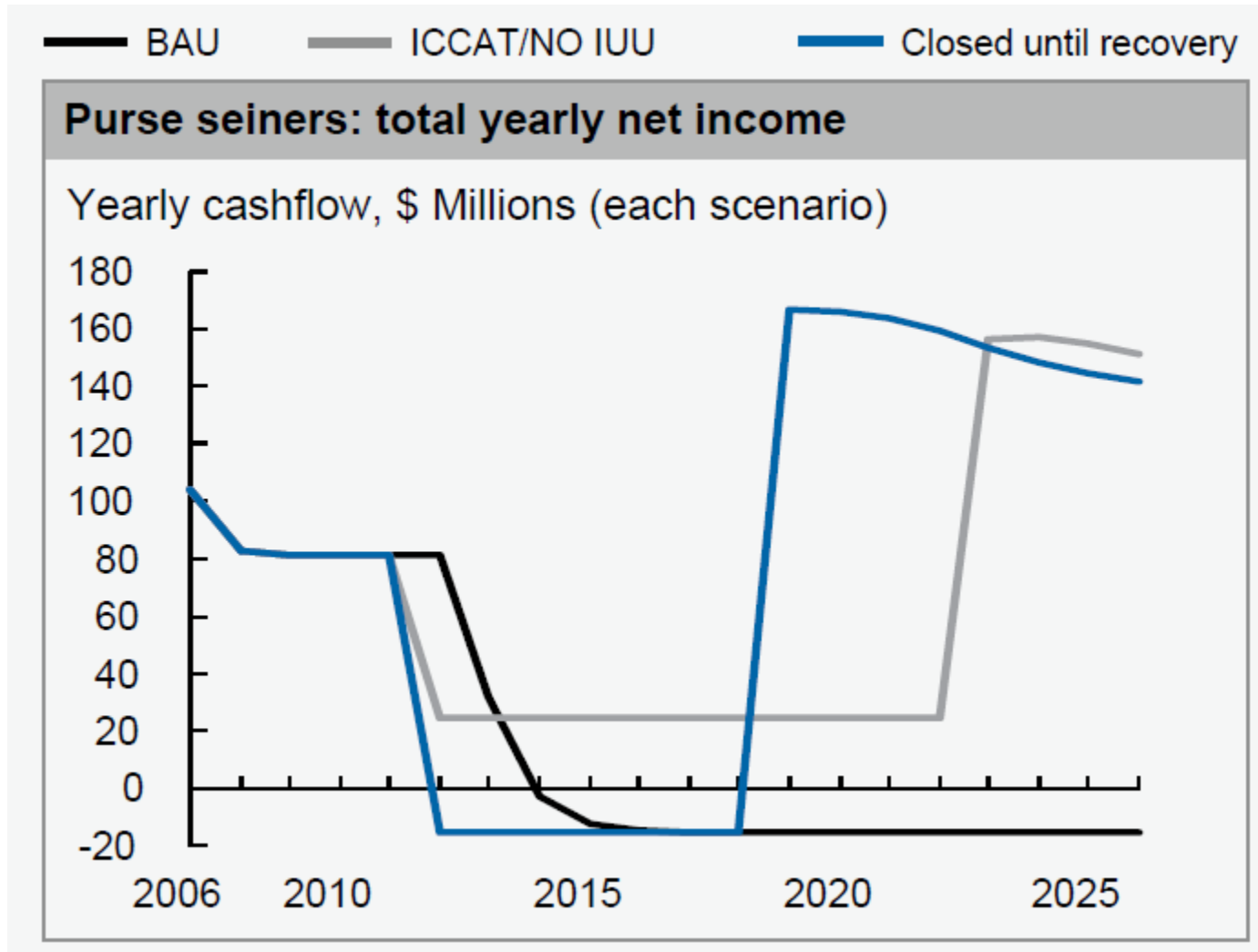
Rebuilding what?



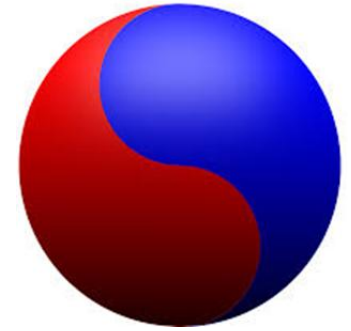
Ecosystem



Economic consequences



From crisis to opportunity



- Raise sectoral awareness on **risk of collapse**:
- Strengthen the **Precautionary Approach**: routine risk assessment
- Increase weight of **long versus short term** outcomes in policy
- Broaden institutions to **introduce ecosystem and economic thinking**
- Increase **data** requirements & **scientific capacity**
- Improve **communication** channels
- Institutionalize **performance assessment**
- Increase administration **responsiveness**
- Increase **industry responsibility**
- Recognize/Strengthen **rights of vulnerable communities**

Rebuilding plans



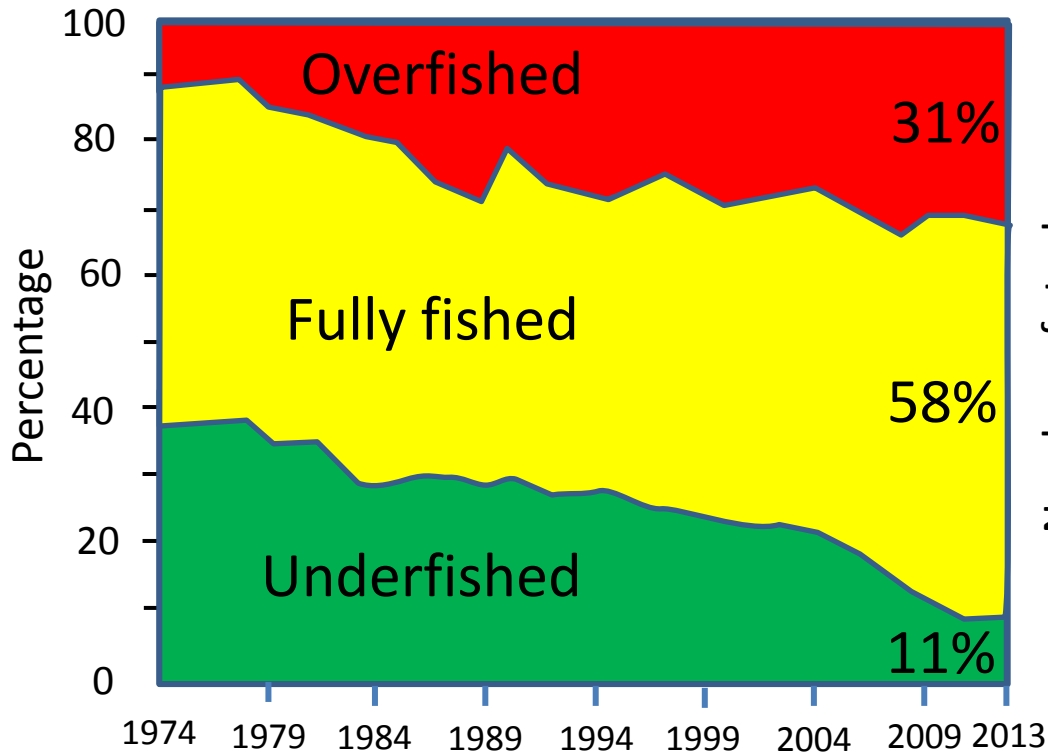
- Not different from standard management planning. May be integrated into it.
- Participative, adaptive, clear objectives, measures, decision rules, penalties, incentives, allocation of responsibilities; monitoring, performance assessment, etc.
- Particularities:
 - *Triggering factors, to start the special regime and to end it. Avoid lingering.*
 - *Dynamic performance assessment: interim targets*
 - *Highly adaptive*
 - *Participative implementation (good information and compliance)*

Rebuilding instruments

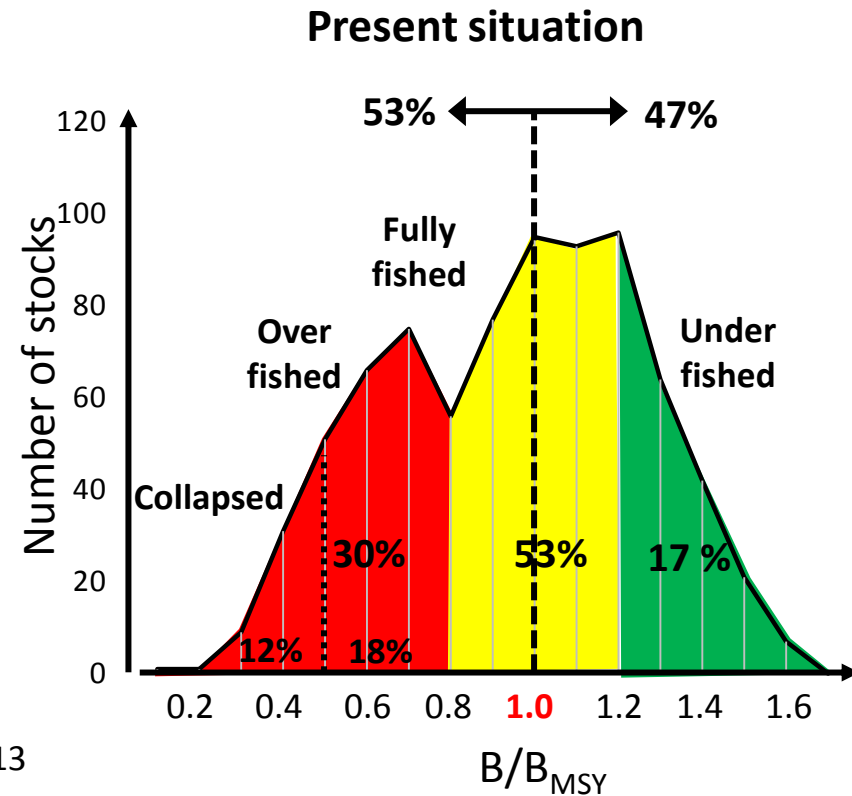


- ALL those available for the ordinary management!
- More stringently applied
- Priorities:
 - Cut on fishing pressure: The deeper the depletion, the more drastic the cut: Fleet size; fishers. Value chain
 - Helping the stock reproduction: mesh sizes, protected areas
 - Assist people in the transition phase and exit.

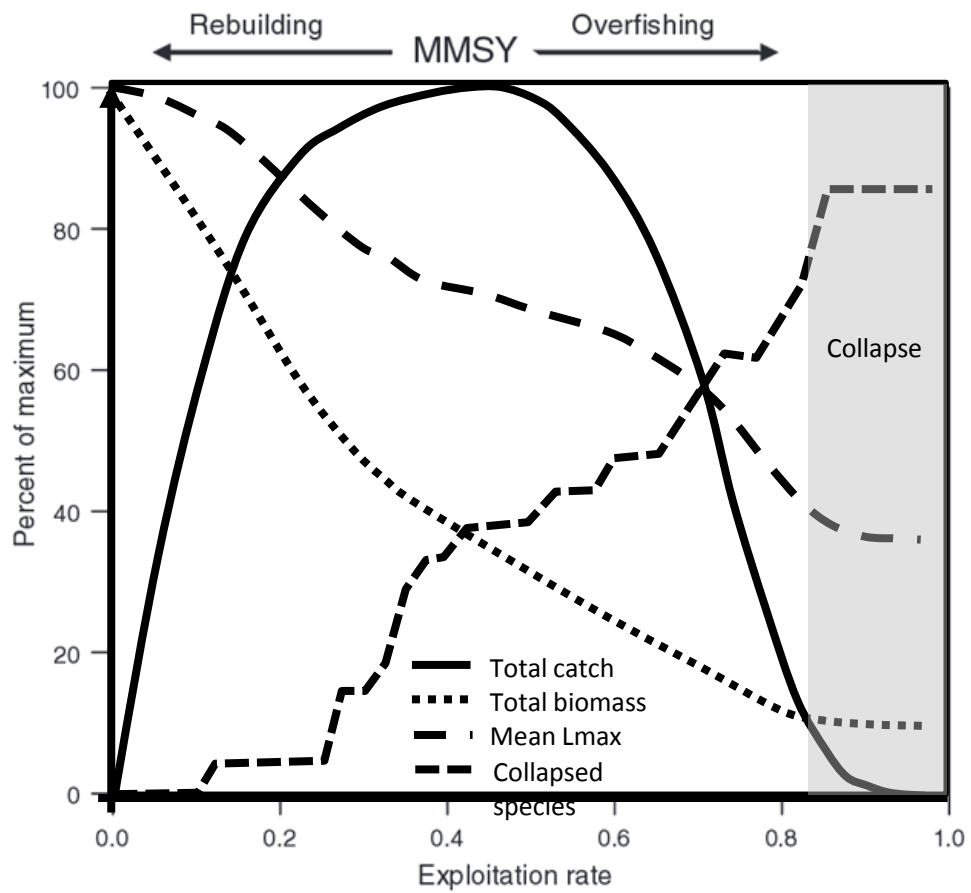
Where do we stand?



Source: FAO, 2016



Source: Rosenberg et al., 2017



From Worm et al., Science mag 2009

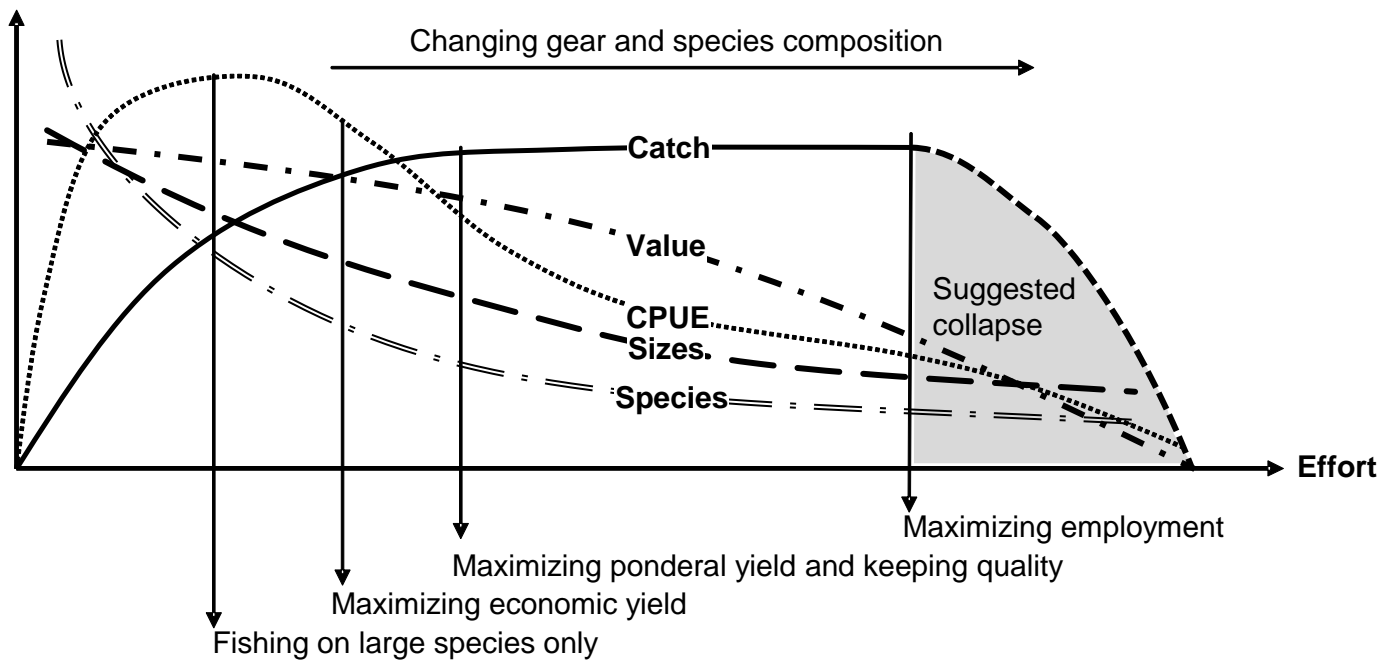


Diagramme of the evolution of total catch, CPUE, value, fish sizes and number of species in a freshwater lake multigear, multispecies fisheries (Welcomme, 2005)

