



# Blueprint for Blue Economy Implementation

Alistair Hobday & Rob Stephenson



Fisheries and Oceans  
Canada

Pêches et Océans  
Canada



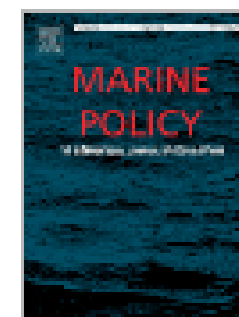
**FUTURE OCEAN AND  
COASTAL INFRASTRUCTURES**  
AN OFI PROJECT





# Marine Policy

Volume 163, May 2024, 106129



## Blueprint for Blue Economy implementation

[Robert L. Stephenson](#)<sup>a b c</sup>  , [Alistair J. Hobday](#)<sup>b c</sup>

Show more 

 Add to Mendeley  Share  Cite

<https://doi.org/10.1016/j.marpol.2024.106129> 

[Get rights and content](#) 

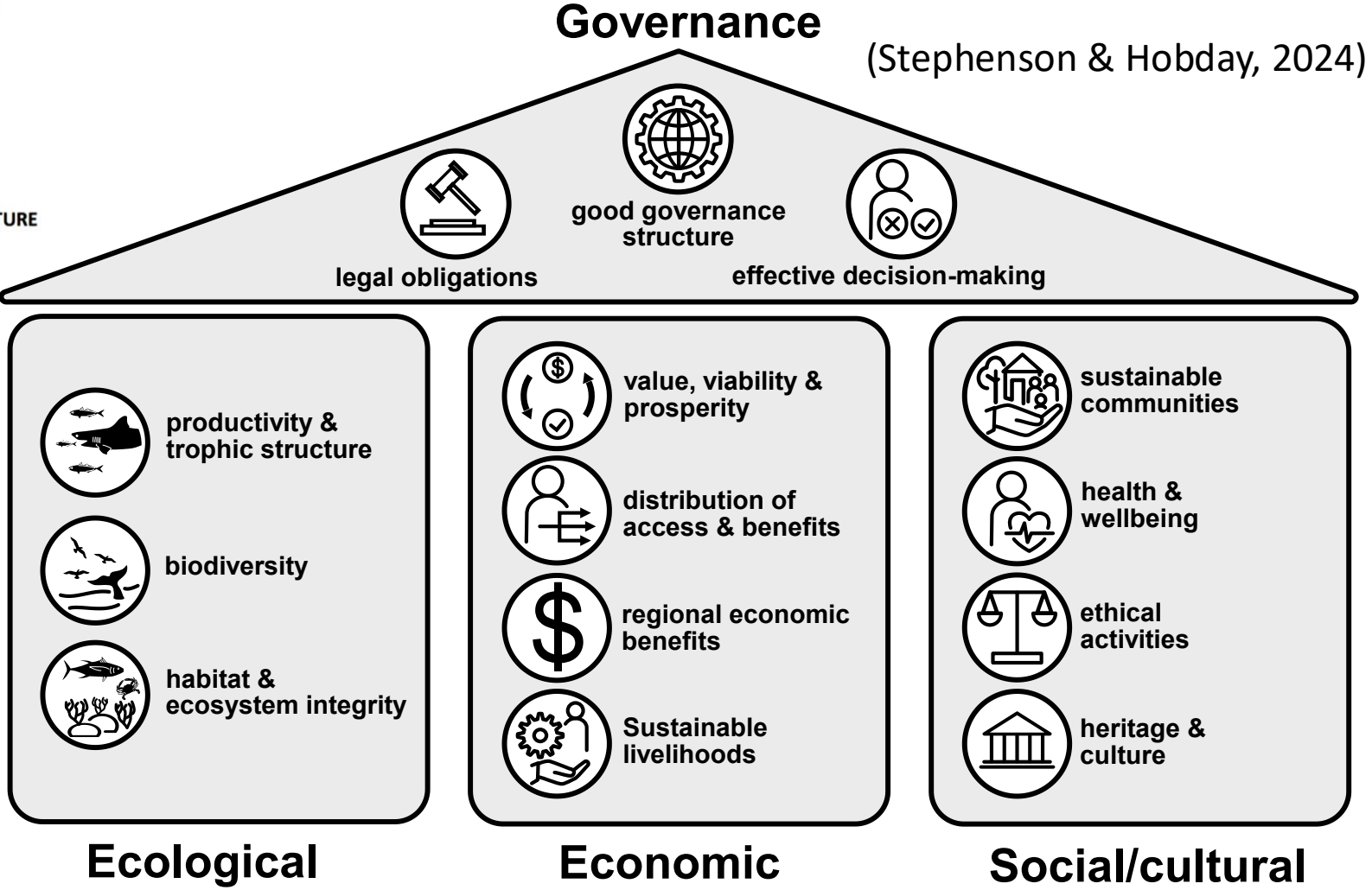
# Steps to implement the Blueprint

1. Articulation of common SES objectives
2. Development of a governance framework in which SES objectives can be applied in management of all activities in an area
3. A process to address conflicts, risks and trade-offs, and
4. Evaluation of cumulative effects and performance

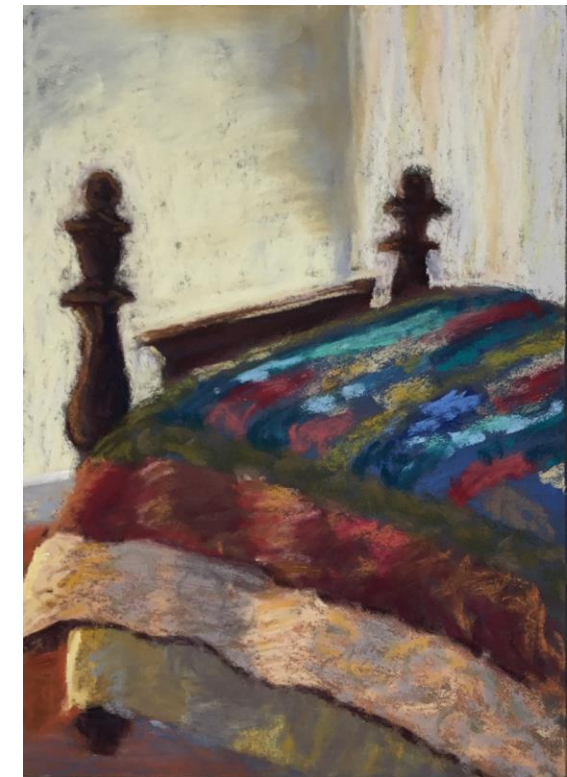
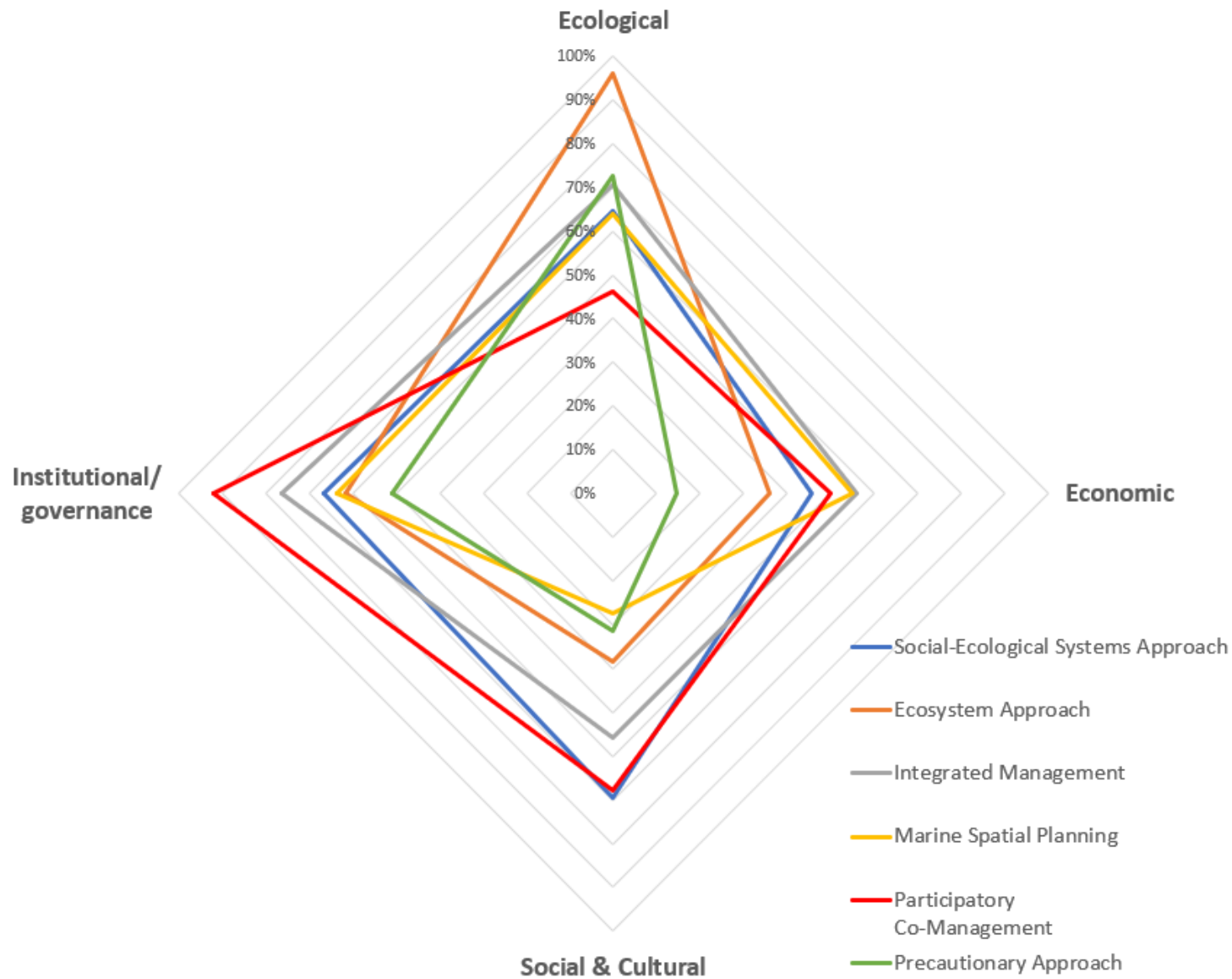
# 1. Articulation of common SES objectives



(Beth Fulton, CSIRO)

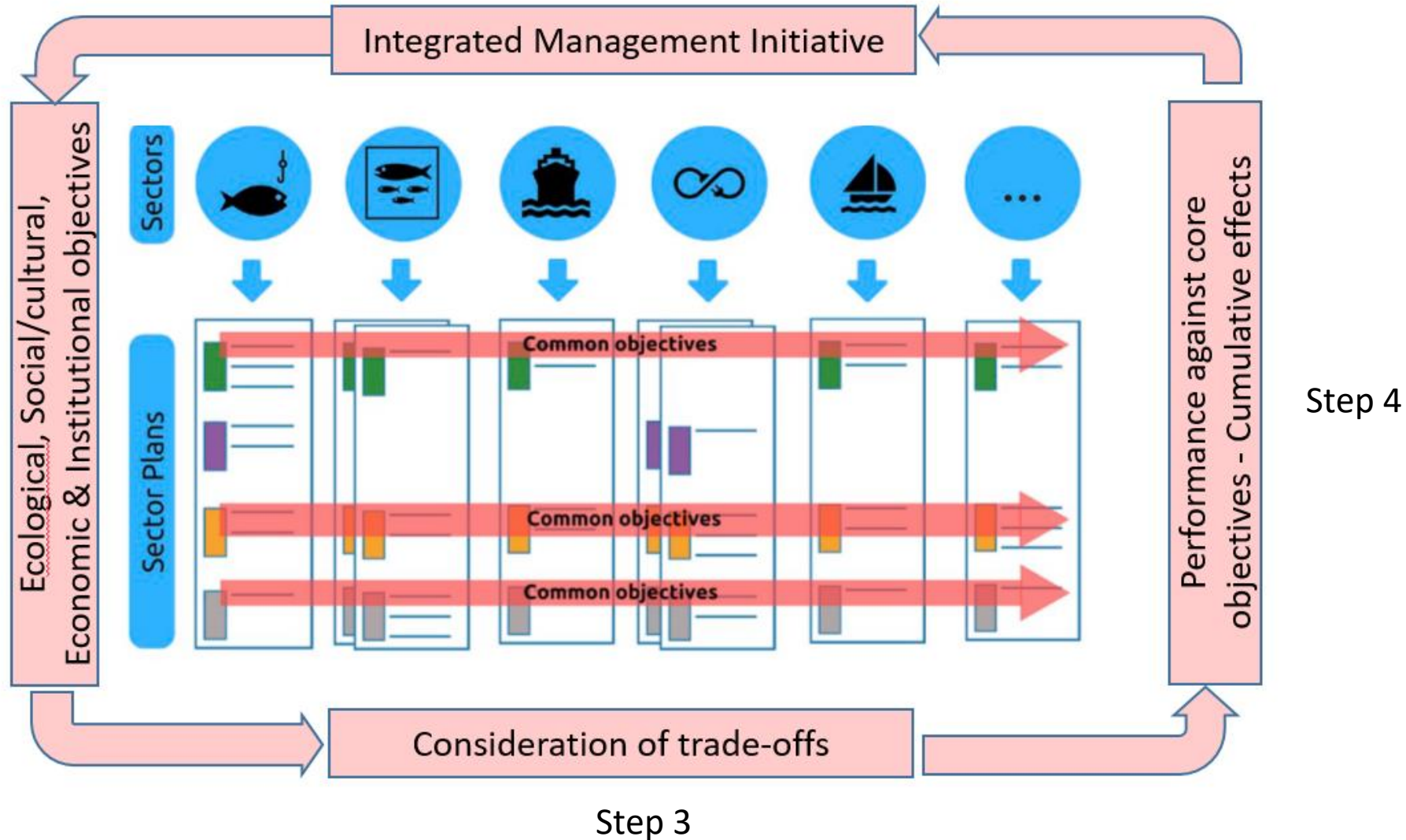


# Complementary concepts for 'the quilt of sustainable governance'

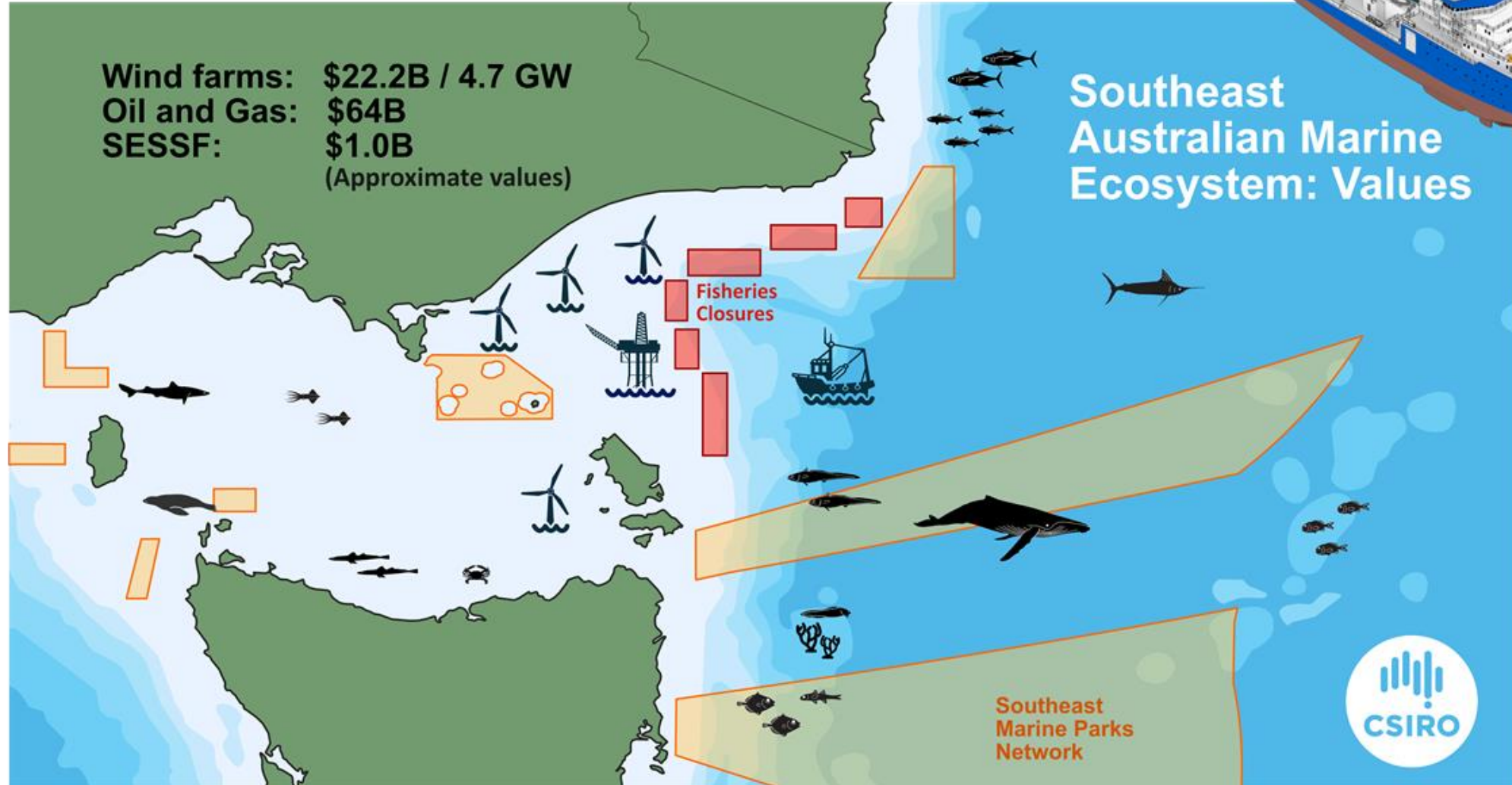


Stephenson et al. 2021 FMARS  
<https://doi.org/10.3389/fmars.2021.630547>

## 2. Proposed framework for IM, EBM, MSP, BE



# Ocean crowding – urgent need for IM



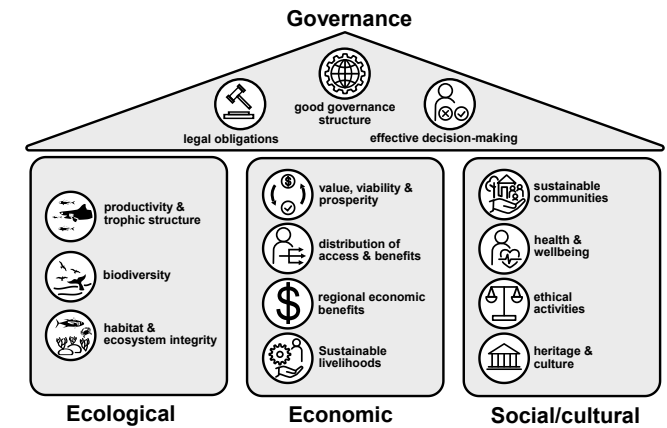
# No offshore turbines in Australia - planning

- But it is coming....and may squeeze out other industries....





# Candidate objectives



	Major candidate BE objective	No Offshore Wind Development	Construction Phase of Offshore Wind Development	Small Scale Offshore Wind Development	Major Offshore Wind Development
Ecological	Marine ecosystems are healthy, resilient and	D No additional (positive or negative) impact (but	D Potential negative impact of noise and	D Potential for habitat mosaics that impact	D Potential for long term and widespread change in



Habitats are protected from impact including noise, benthic disturbance and changes in flow during both construction and operation

D No additional (positive or negative) impact

D Potential negative impact of noise and sediment disturbance elevated for many months  
 P. Use of advanced technology to reduce sediment plumes from bottom disturbance

D Impact on habitat from pilings and anchor structures.  
 P Potential mitigation to avoid substrate change

D Major shift in seafloor character – hard bottom around each pylon or anchor structure  
 P Potential for creative habitat enhancement



Recovery (or at least no further loss) of protected or endangered species

D No additional impact (but there is ongoing loss in region due to other activities and factors)

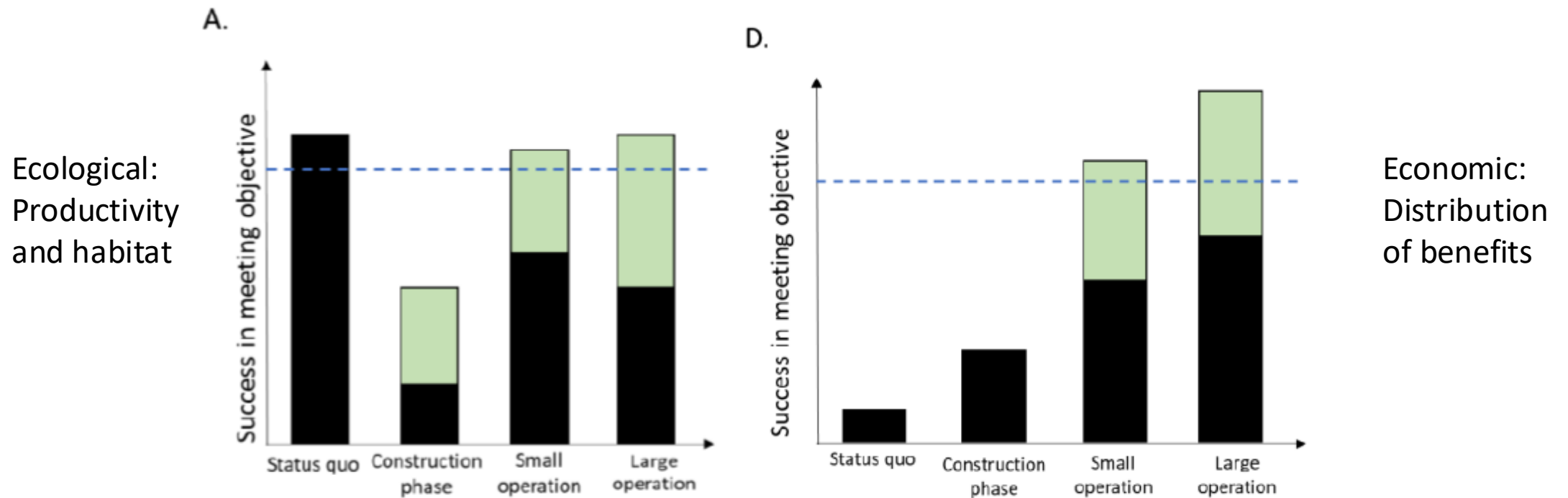
technology to reduce sediment plumes from bottom disturbance  
 D Potential negative impact of noise and sediment disturbance elevated for many months  
 P Mitigation through specific efforts to protect endangered species

D Limited disruption of migratory species and no impact on resident endangered species  
 P Some potential recovery of endangered species due to displacement of some other activities

habitat enhancement  
 D Potential for major disruption of resident species from installations and associated vessels, and some shifts in species composition.  
 P Project-funded program of unified action to promote monitoring and recovery of endangered

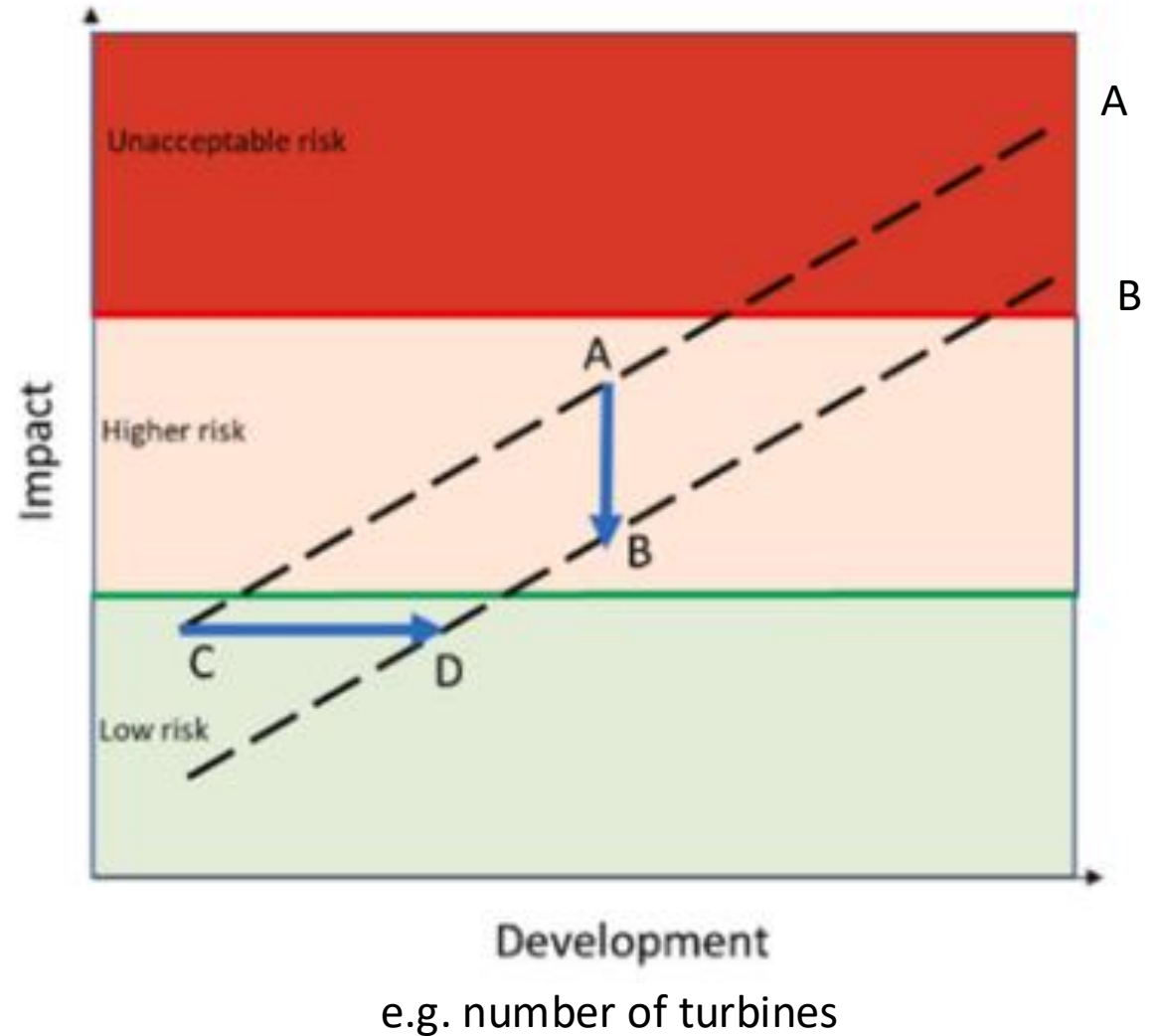
# Scenarios of offshore wind development

Identification of conflicts, risks and trade-offs between competing uses (**Figure 3**)



# How might objectives be used?

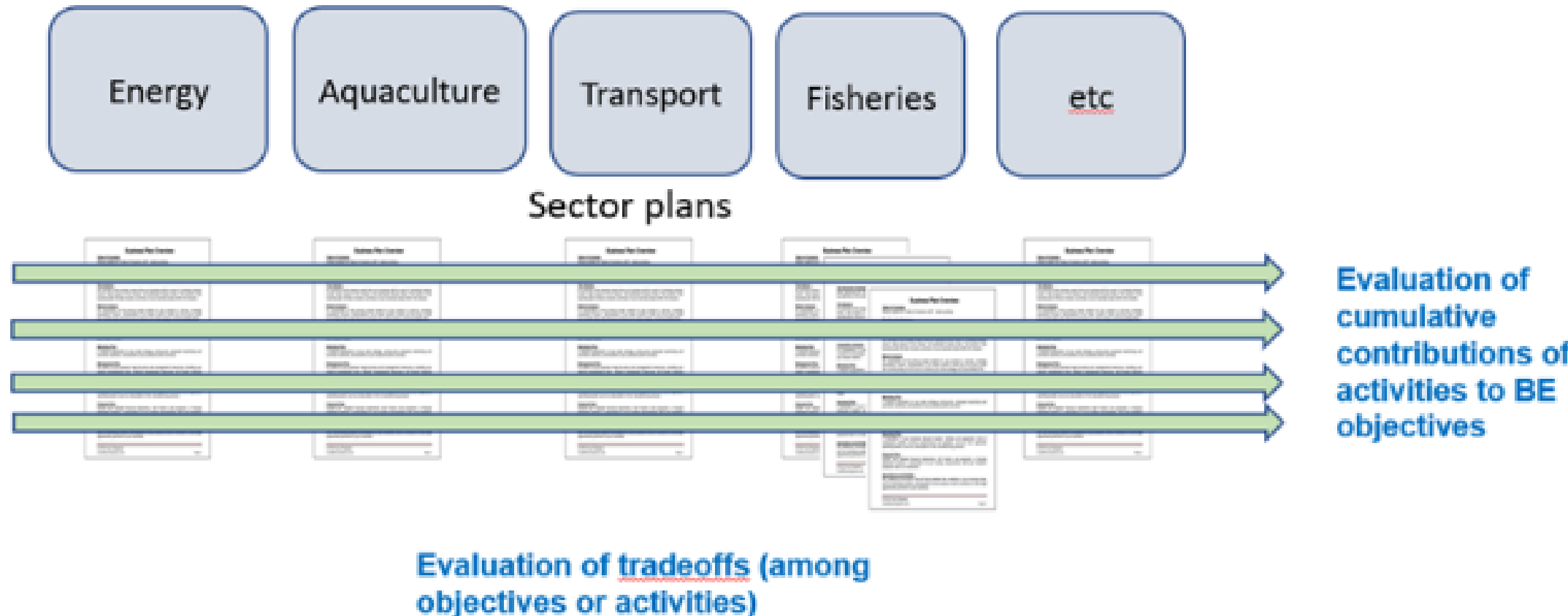
- exploring trade-offs.



# Example: Scenarios for future offshore wind energy

Objective	Status Quo	Construction phase	Small operation	Large operation
1 Ecological – Productivity and habitat	Green	Red	Yellow	Yellow
2 Ecological – Recovery of endangered species	Red	Red	Yellow	Yellow
3 Economic - Value and livelihoods	Red	Yellow	Red	Yellow
4 Economic – Distribution of access and benefits	Red	Red	Yellow	Yellow
5 Social – Health and well-being	Red	Red	Red	Yellow
6 Social – Ethical activities	Red	Red	Red	Yellow
7 Social – Heritage and culture	Red	Red	Red	Yellow
8 Institutional – Energy security	Red	Red	Red	Green
9 Institutional – Good governance structure	Red	Yellow	Yellow	Yellow
10 Institutional – effective decision-making	Red	Yellow	Yellow	Yellow

# Reducing the risk **from** ocean crowding



# Value proposition for Integrated Ocean Management

- Harmonisation among jurisdictions and sectors
- Increased collaboration and planning
- Consistency, reduced conflict, increased management credibility
- Full sustainability (ecological, economic, social/cultural and governance)
- Coordinated action on issues (Climate change, Indigenous reconciliation)
- Consideration of trade-offs and cumulative management performance
- Strategic opportunity to increase investment
- Cost effective compilation and use of data

# Additional reading

- Stephenson, R., A. J. Hobday, C. Cvitanovic, K. Alexander, G. Begg, R. Bustamante, P. Dunstan, S. Frusher, M. Fudge, B. Fulton, M. Haward, C. Macleod, J. McDonald, K. Nash, E. Ogier, G. Pecl, E. Plaganyi, I. v. Putten, T. Smith and T. Ward (2019). **A practical framework for implementing and evaluating integrated management of marine activities.** Ocean and Coastal Management 177: 127–138.  
<https://doi.org/110.1016/j.ocecoaman.2019.1004.1008>.
- Stephenson, R. L. and A. J. Hobday (2024). **Blueprint for Blue Economy implementation.** Marine Policy:  
<https://doi.org/10.1016/j.marpol.2024.106129>.
- Stephenson, R. L., A. J. Hobday, E. H. Allison, D. Armitage, K. Brooks, A. Bundy, C. Cvitanovic, M. Dickey-Collas, N. d. M. Grilli, C. Gomez, A. Jarre, L. Kaikkonen, R. Kelly, R. Lopez, E.-K. Muhl, M. G. Pennino, J. C. Tam and I. v. Putten (2021). **The quilt of sustainable ocean governance: Patterns for practitioners.** Frontiers in Marine Science 8: 630547. doi: 630510.633389/fmars.632021.630547.
- Stephenson, R. L., A. J. Hobday, I. Butler, T. Cannard, M. Cowlshaw, I. Cresswell, C. Cvitanovic, J. Day, K. Dobbs, L. X. C. Dutra, S. Frusher, M. Fudge, B. Fulton, B. M. Gillanders, N. Gollan, M. Haward, T. Hutton, A. Jordan, J. McDonald, C. Macleod, G. Pecl, E. E. Plaganyi, I. v. Putten, J. Vince and T. Ward (2023). **Integrating management of marine activities in Australia.** Ocean and Coastal Management:  
<https://doi.org/10.1016/j.ocecoaman.2022.106465>.