

Governing marine protected areas: social-ecological resilience through institutional diversity



UNEP



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**Making marine protected
areas more effective:
resilience through diversity**



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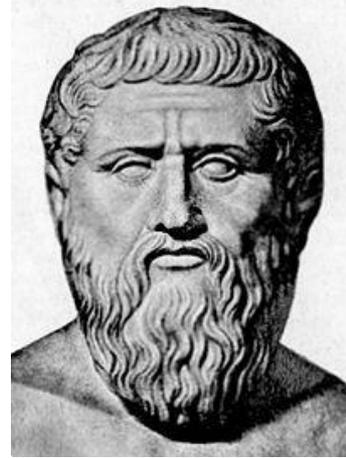
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Governance = *steer* of people and the society they constitute in order to achieve strategic collective objectives

State control – government and law

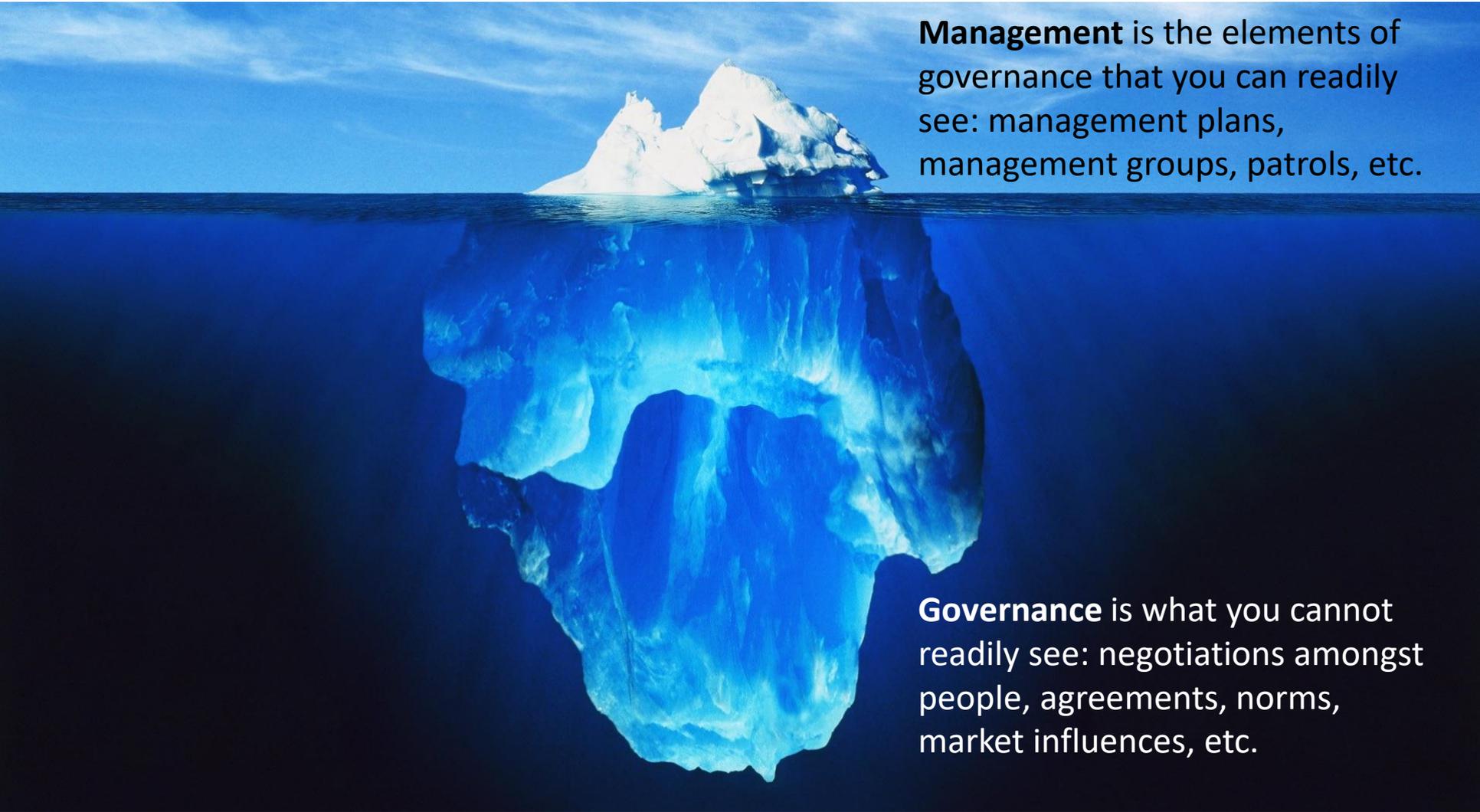
Market forces – capitalism and economies

Public interests – people and civil society



Plato, 360 BC

Management and governance: there is no difference!



Management is the elements of governance that you can readily see: management plans, management groups, patrols, etc.

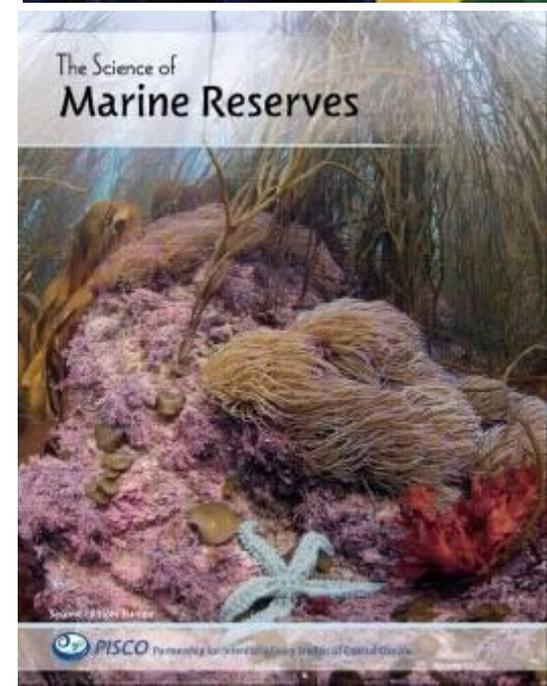
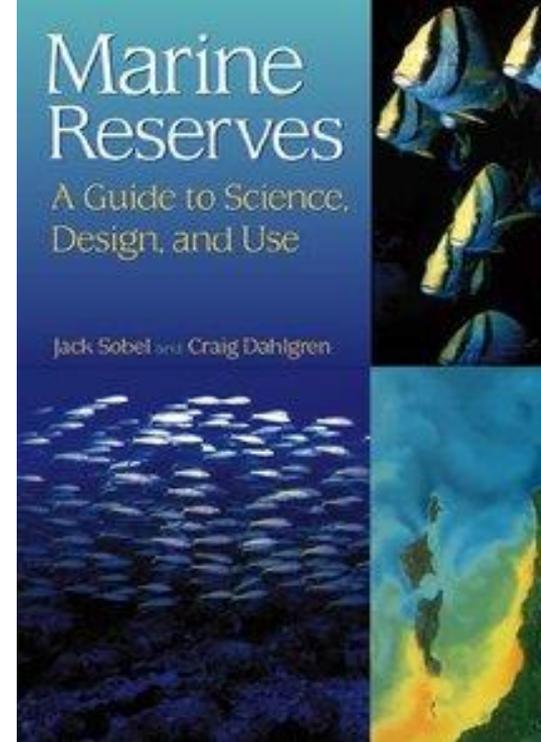
Governance is what you cannot readily see: negotiations amongst people, agreements, norms, market influences, etc.

Marine protected areas (MPAs) are an ideal vehicle for exploring the effectiveness of different governance approaches in promoting social-ecological resilience

The need for MPAs to address growing concerns & achieve conservation objectives is now *quite* widely accepted

Debates are moving on to how we can design networks of MPAs, and the knowledge-base and guidance is rapidly developing

Also a need to develop knowledge-base and guidance on how to **effectively** manage or **govern** MPAs



Co-management is the recommended approach

IUCN MPA Guidance

Combine top-down & bottom-up approaches

“design and management of MPAs must be both top-down and bottom-up”
(Kelleher 1999)

IUCN MPA Network Guidance (2008)

Recommends both top-down & bottom-up approaches

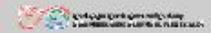
World Commission on Protected Areas (WCPA)

Guidelines for Marine Protected Areas

Edited and coordinated by Gáinne Kelleher
Adrian Phillips, Series Editor



Best Practice Protected Area Guidelines Series No. 3



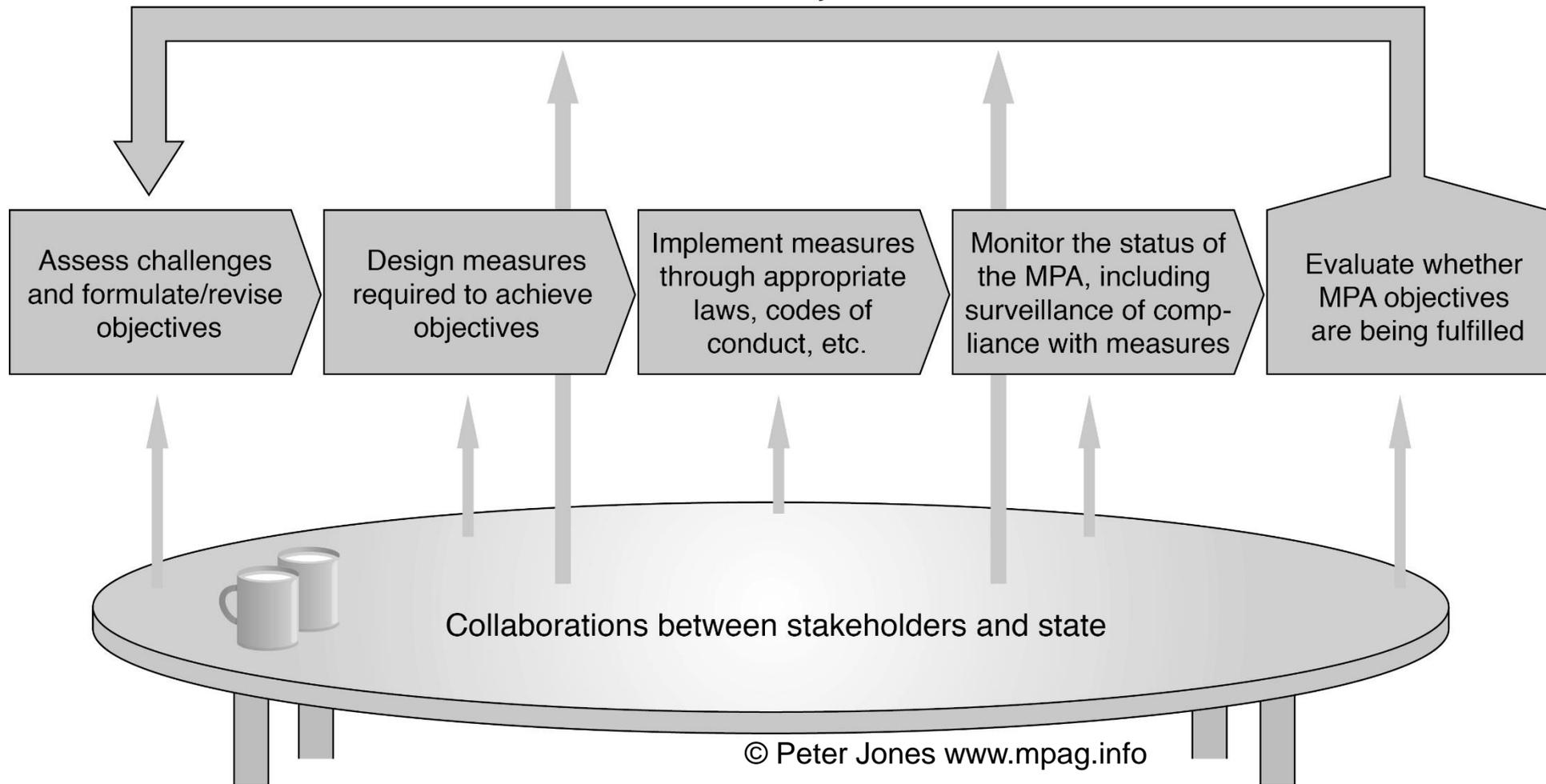
Establishing Resilient
Marine Protected Area
Networks – Making It
Happen

Full Technical Version, including Ecological,
Social and Governance Considerations, as well
as Case Studies

2008

Adaptive co-management considered by many to be way forward

Feedback & adjustment

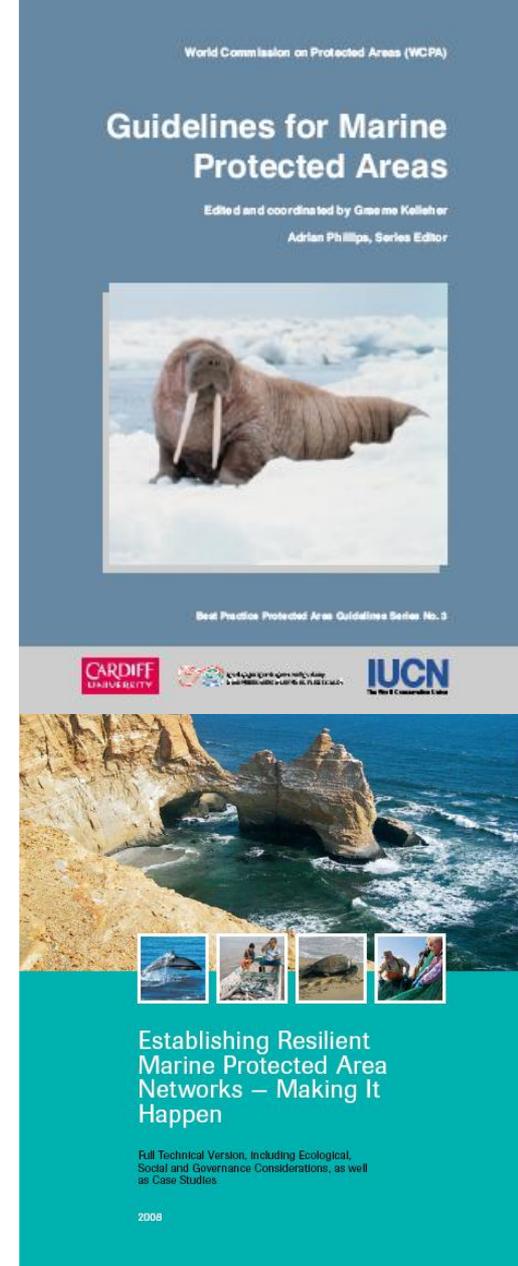


Too simplistic and linear to provide guidance on the **complex interactions** between stakeholders and the state in governance processes, **including the diversity of different priorities & values**

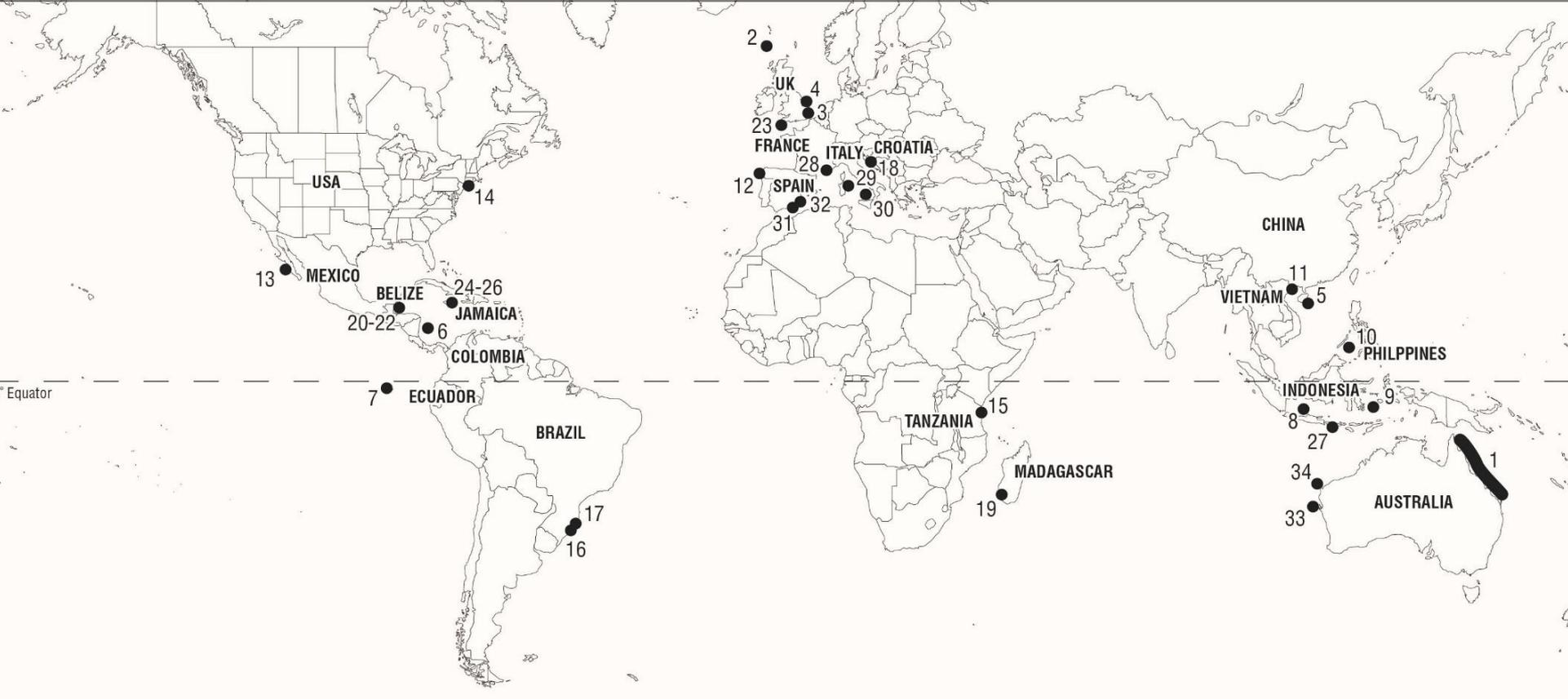
So what does

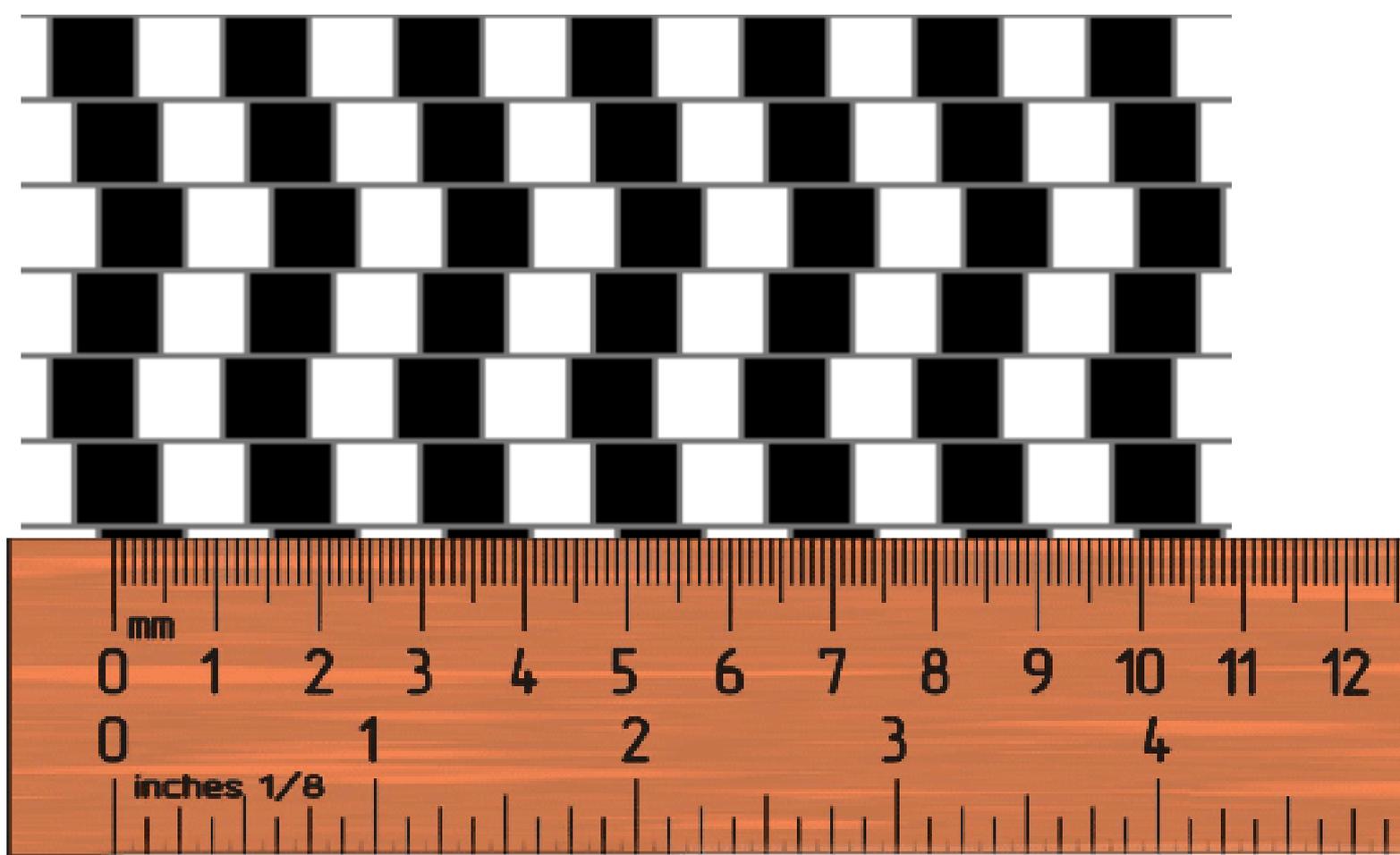
“design and management of MPAs must be both top-down and bottom-up” (Kelleher 1999) actually mean in practice?

Recognising governance complexity and diversity, this is the key question that the MPA governance project aims to address, currently through 34 case studies



- | | | | |
|--|--|---|--------------------------------------|
| 1. Great Barrier Reef Marine Park | 10. Tubbataha Reefs Natural Park | 19. Velondriake Locally Managed Marine Area | 28. Port-Cros National Park |
| 2. Darwin Mounds European Marine Site (EMS) | 11. Ha Long Bay World Natural Heritage Area | 20. Hol Chan Marine Reserve | 29. Tavolara-Punta Coda Cavallo MPA |
| 3. North East Kent EMS | 12. Os Miñanzos Marine Reserve of Fishing Interest | 21. Caye Caulker Marine Reserve | 30. Ustica Island MPA |
| 4. The Wash EMS | 13. Isla Natividad MPA | 22. Bacalar Chico Marine Reserve | 31. Cabo de Gata- Nijar MPA |
| 5. Sanya Coral Reef National Marine Nature Reserve | 14. Great South Bay Marine Conservation Area | 23. Fal & Helford EMS | 32. Cabo de Palos-Islas Hormigas MPA |
| 6. Seaflower Marine Protected Area (MPA) | 15. Chumbe Island Coral Park | 24. Sandals Boscobel Special Fisheries Conservation Area (SFCA) | 33. Shark Bay Marine Park |
| 7. Galapagos Marine Reserve | 16. Baleia Franca Environmental Protection Area | 25. Oracabessa SFCA | 34. Ningaloo Marine Park |
| 8. Karimunjawa Marine National Park | 17. Pirajubaé Marine Extractive Reserve | 26. Bluefields Bay SFCA | |
| 9. Wakatobi National Park | 18. Cres-Lošinj Marine Natura 2000 Site | 27. Nusa Penida MPA | |



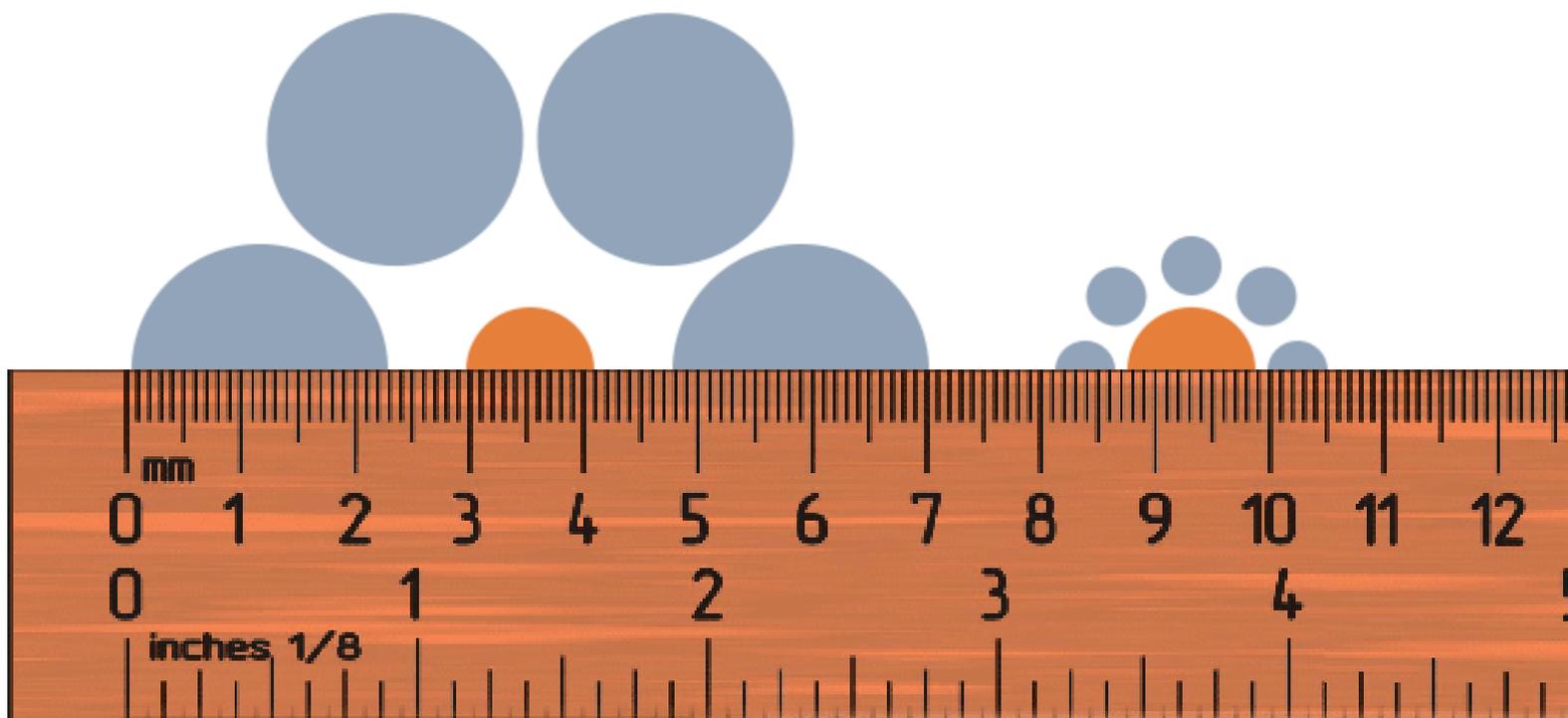


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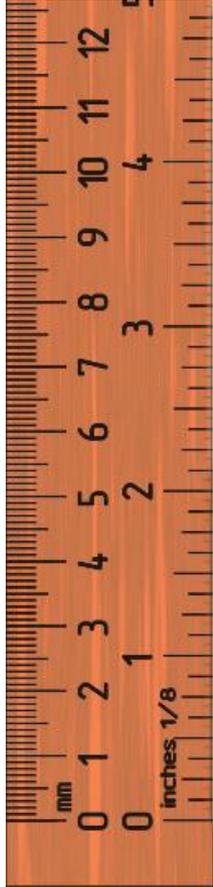
MPAG analytical framework [[full outline](#)]

- Context including metrics: per capita GDP and growth rate, HDI, state capacity, population below poverty line, unemployment rate
- Objectives
- Driving Forces/Conflicts
- Governance Framework/Approach
- **Effectiveness (0-5)**
- Incentives **employed & needed:**

Economic
Interpretative
Knowledge
Legal
Participative

*: how incentives interact and are **combined***

- Cross cutting themes: role of leadership, role of NGOs, equity issues



Case studies assigned to one of four 'governance approach' categories

Approach I - **government-led** (13 case studies)

Approach II - **decentralised governance** (12 case studies)

Approach III - **community-led** (4 case studies)

Approach IV - **private-led** (2 case studies)

Also 3 case studies of **ineffective governance**

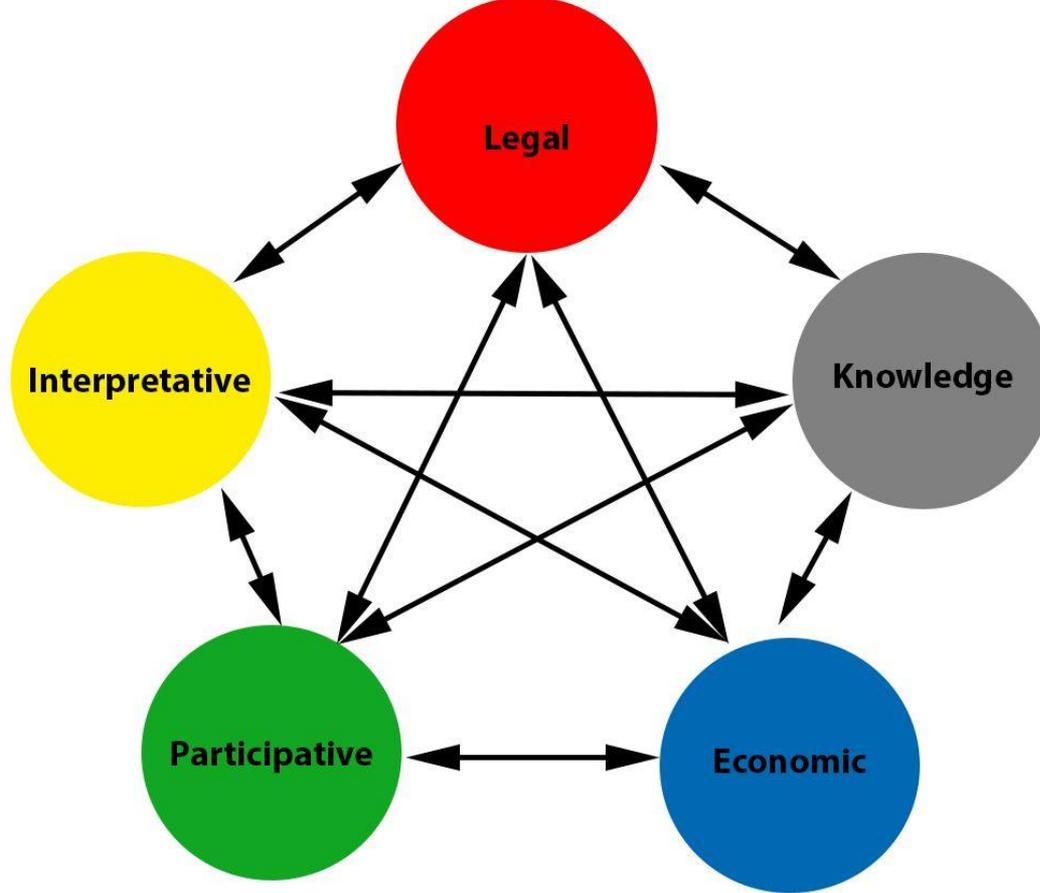
Economic incentives: using economic and property rights approaches to promote the fulfilment of MPA objectives (10)

Interpretative incentives: promoting awareness of the conservation features of the MPA, the related objectives for conserving them, the policies for achieving these objectives and support for related measures (3)

Knowledge incentives: respecting and promoting the use of different sources of knowledge to better inform MPA decisions (3)

Legal incentives: use of relevant laws, regulations etc. as a source of 'state steer' to promote compliance with decisions and thereby the achievement of MPA obligations (10)

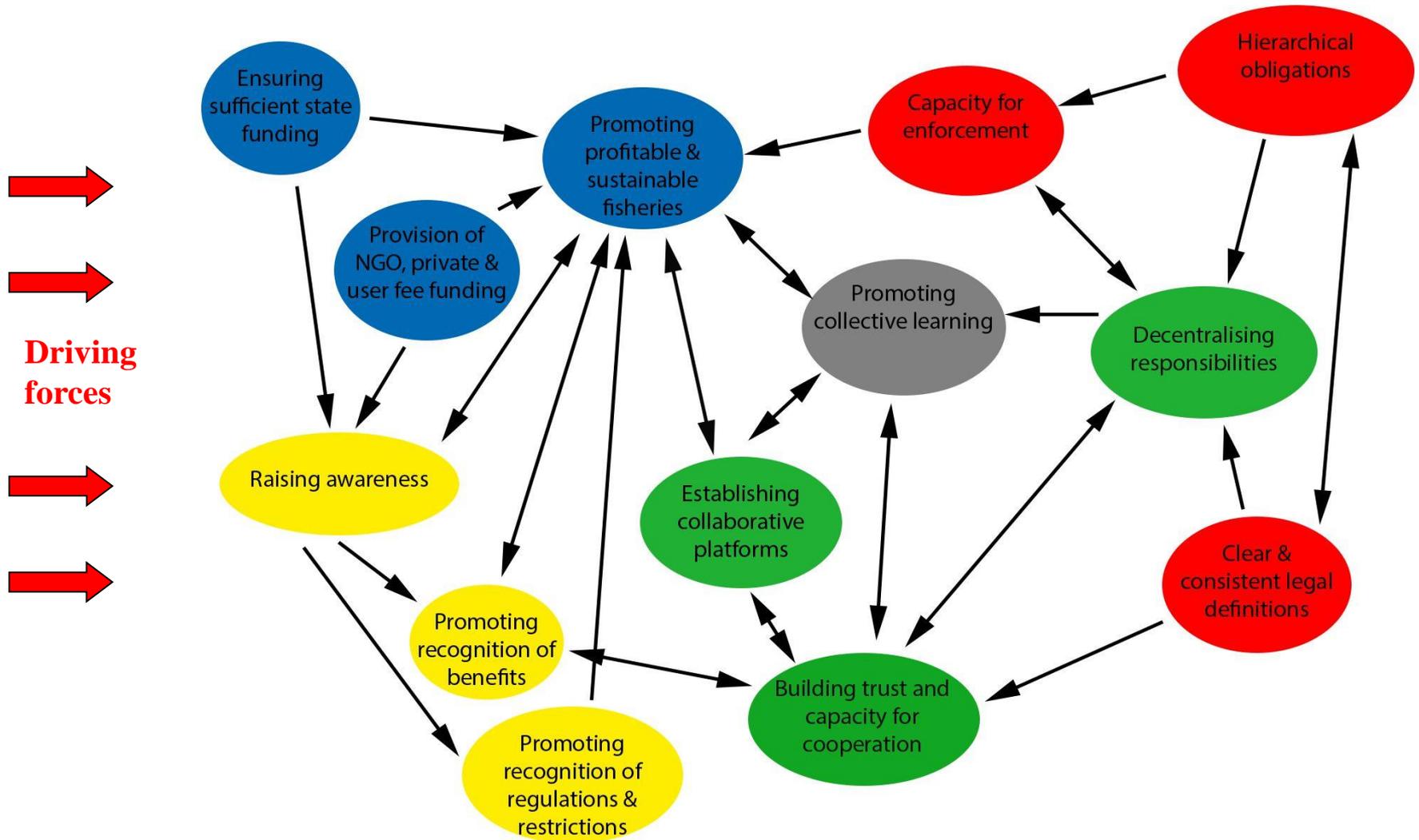
Participative incentives: providing for users, communities and other interest groups to participate in and influence MPA decision-making that may potentially affect them, in order to promote their 'ownership' of the MPA and thereby their potential to cooperate in implementation of decisions (10)



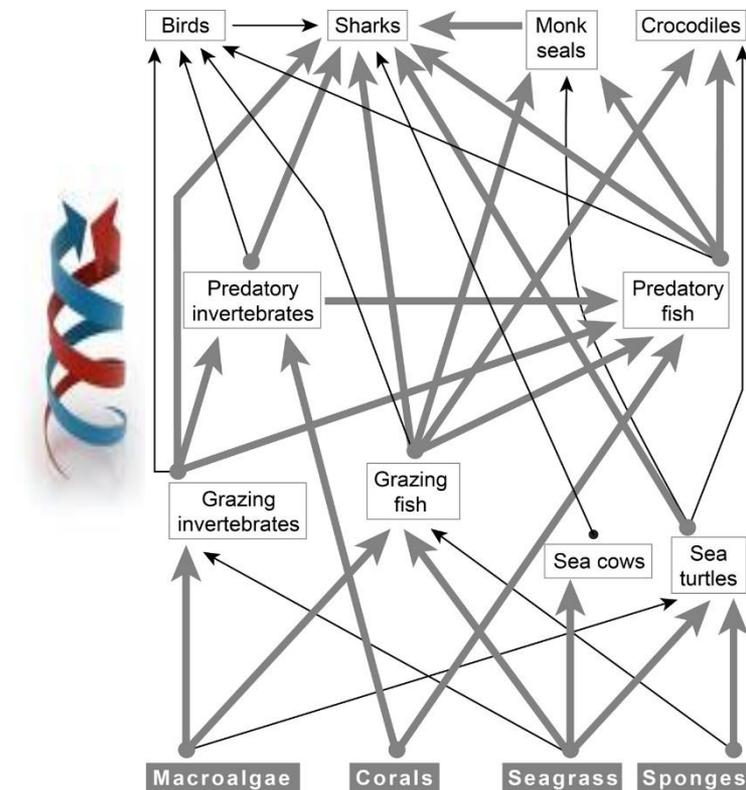
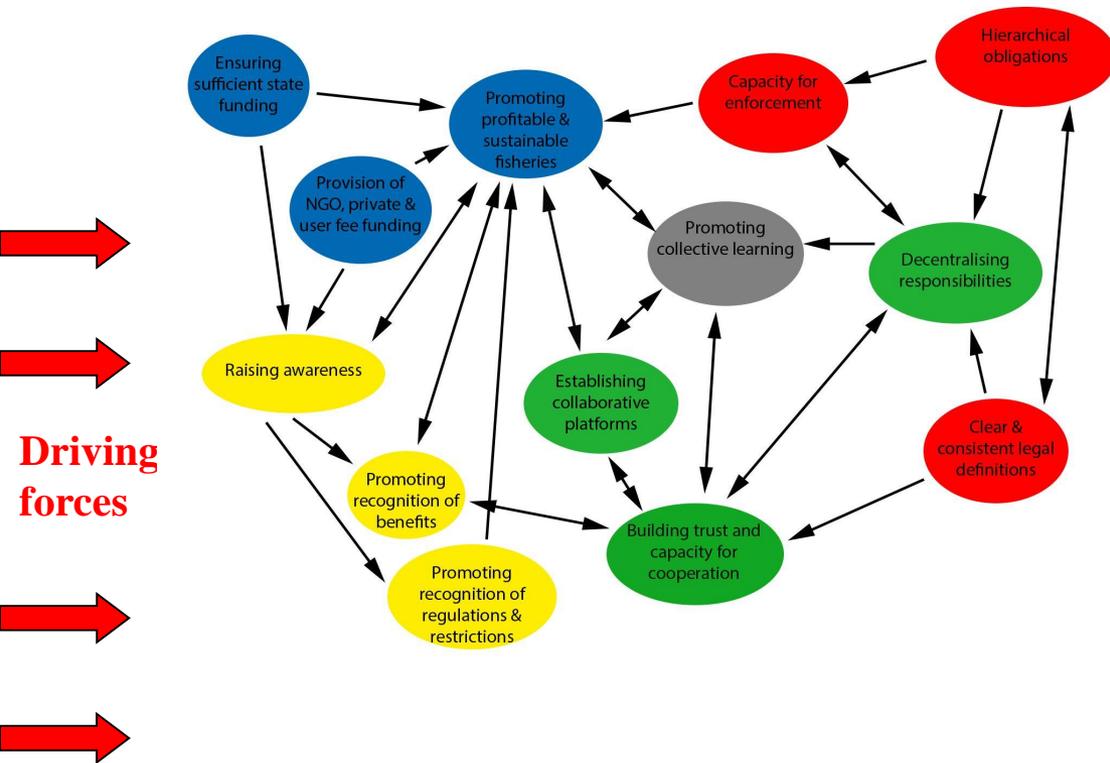
Also important to consider how incentives from different categories interact with and support each other, working in combination

Distinction between top-down, bottom-up and market approaches thus becomes blurred, if not irrelevant, as you need to combine incentives based on all three approaches, including supporting role of interpretative & knowledge incentives

What key attribute confers stability in governance systems?



Incentive diversity → more resilient governance framework →
 increased effectiveness of MPA → increased biodiversity → more
 resilient ecosystem → increased ecosystem services: fish catches,
 tourism, coastal defence, etc → more resilient social system →
increased resilience of social-ecological system



Great Barrier Reef Marine Park (Australia)

Uncertain whether declines in fish populations and/or terrestrial runoff exacerbating crown of thorns starfish outbreaks;

No-take zones (NTZs) area increased on a precautionary basis;

Recoveries in health of NTZs make them more resilient: fewer starfish outbreaks than fished areas leading to higher coral cover.

Isla Natividad (Mexico)

Relatively large body size & high egg production of abalone populations in NTZs conferred resilience to anoxia episodes related to ocean warming: increased survival and recovery rate;

Larval export promoted replenishment of populations in fished areas

Chumbe (Tanzania)

Coral reefs in no-take MPA less impacted by coral bleaching and recovered sooner: considered most resilient in Western Indian Ocean

£22 with discount code DC361

Governing Marine Protected Areas

Resilience through Diversity



Peter J.S. Jones

earthscan
from Routledge

Systematic way of '**deconstructing**' MPA governance into different categories of incentives and governance approaches

MPAG analysis framework can be applied on a **multiple case study analysis** basis to a larger sample of MPA case studies

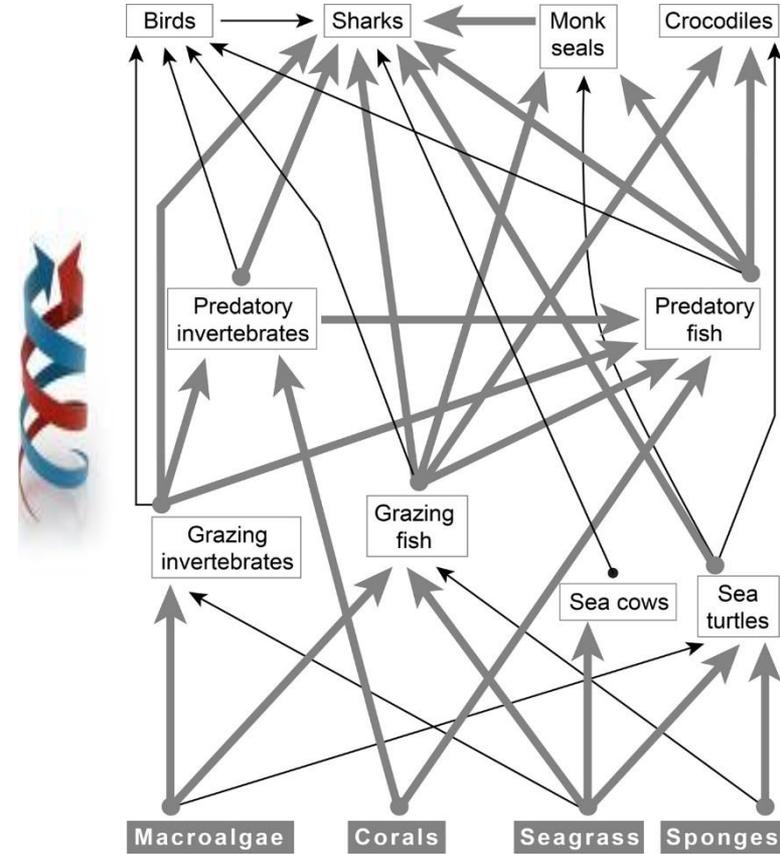
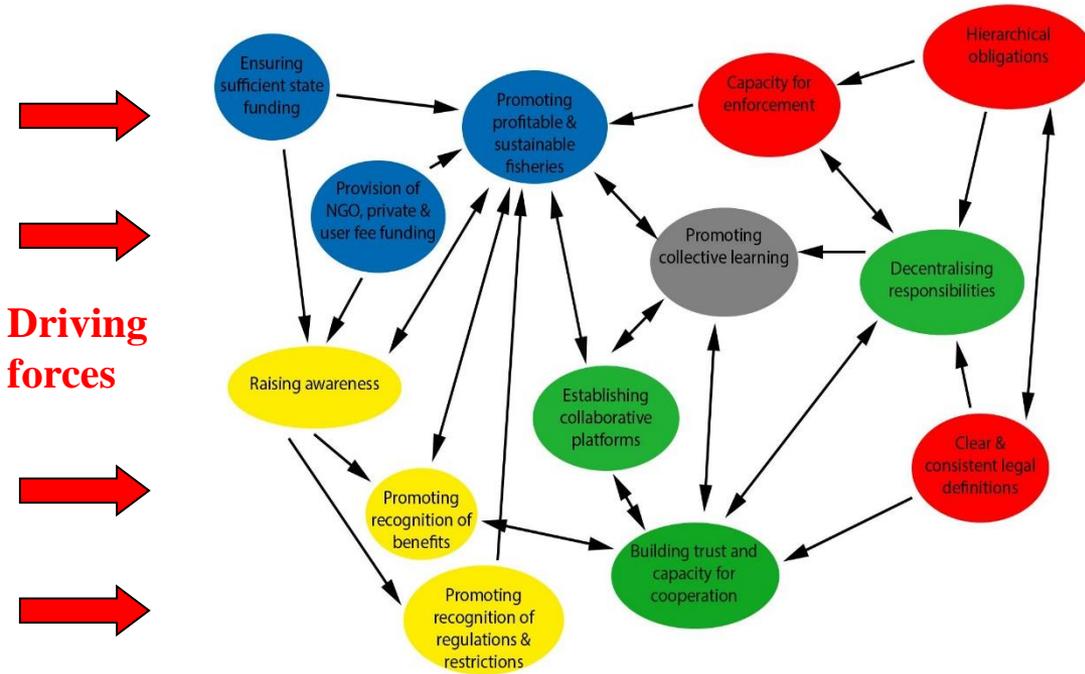
Guidance for assessing governance issues in any given MPA and transferring 'good practice'

More realistic theoretical and empirical framework for studies related to wider natural resource governance

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tinyurl.com/GoverningMPAs

Diversity is the key to resilience, both of species in ecosystems and incentives in governance systems



Jackson et al (2001) *Science*, 293, 629-638

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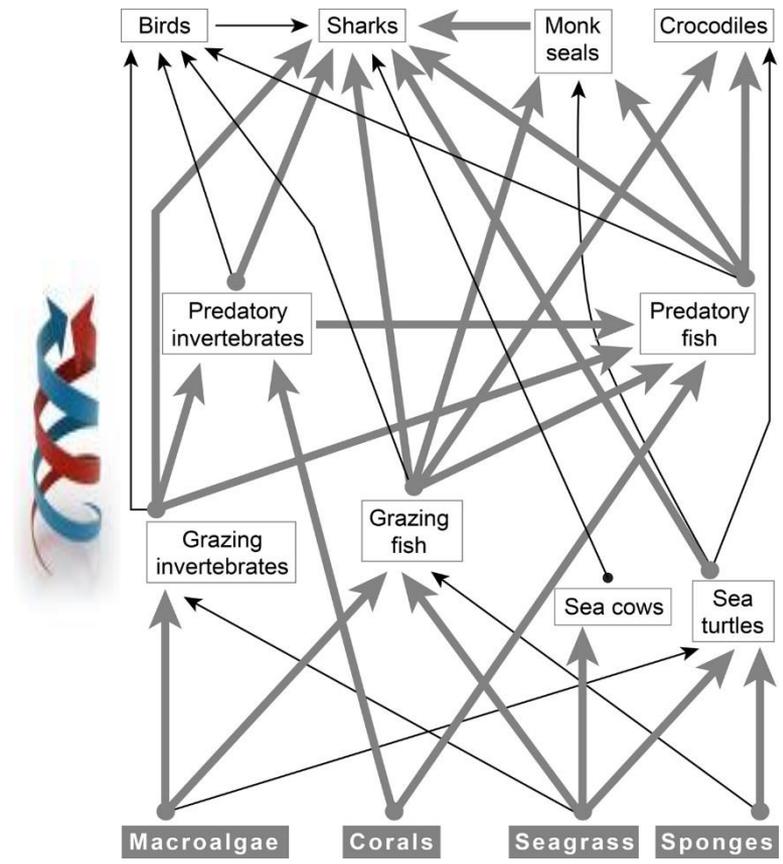
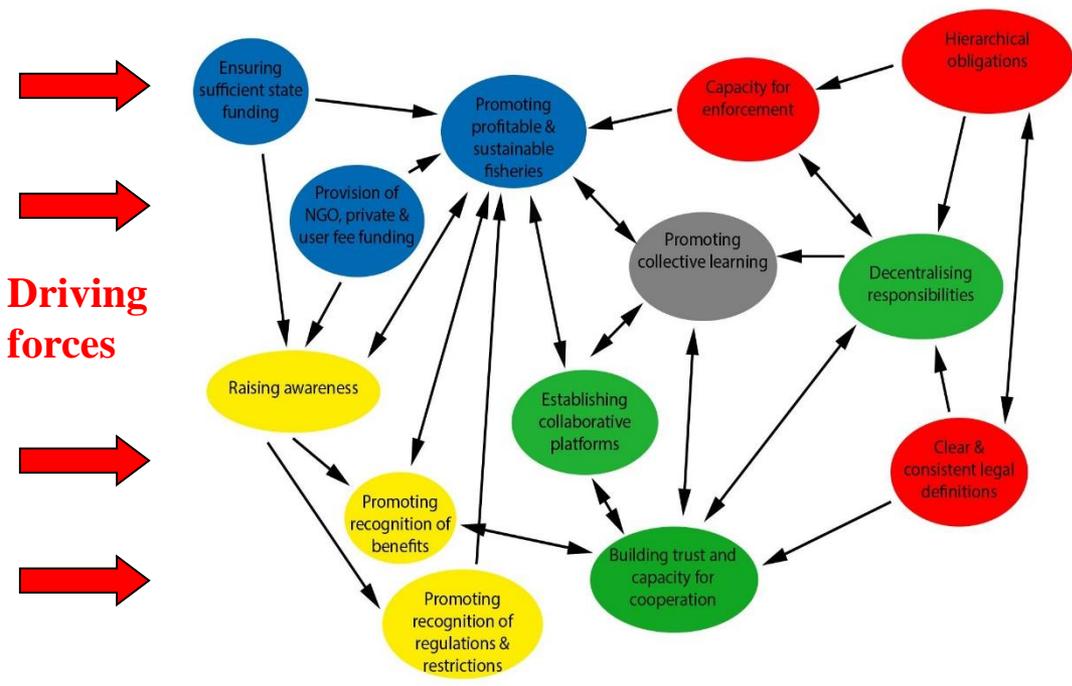
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Implications for MPAs in the UK

- Diversity of governance incentives from all five categories is always needed for effective MPAs
- Voluntary measures alone do not represent ‘better regulation’, *ie* will not be effective without legal back-up and reinforcement
- Legal obligations and incentives are essential for reinforcing governance frameworks, *eg* the most effective MPAs so far are driven by legal incentives to EC
- A systematic, adaptive approach to the governance of UK networks of MPAs is needed, as is continued political will for effective MPAs from the UK government(s)



Diversity is the key to resilience, both of species in ecosystems and incentives in governance systems



Jackson et al (2001) *Science*, 293, 629-638

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