1st Regional African Workshop for GEF IW Projects

BUILDING AN ECOSYSTEM APPROACH TO MANAGING AFRICAN MARINE RESOURCES

Science to Governance

Planning and Testing a Mechanism in an African LME

Agulhas and Somali Current Large Marine Ecosystems Project

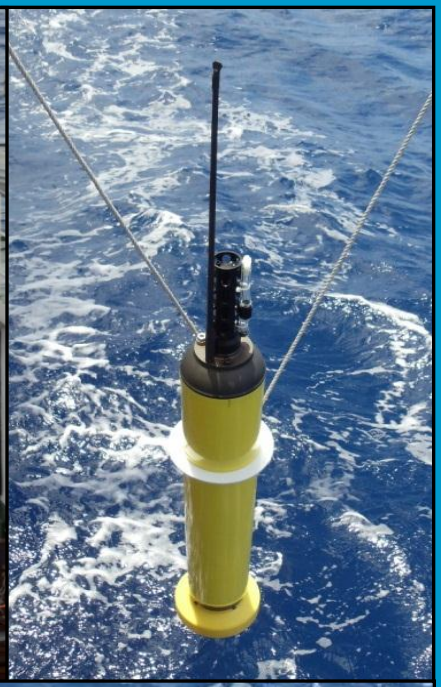
ASCLME Management & Governance Approach

There are five important steps which ASCLME is following in terms of management and governance at the ecosystem level:

1. The Baseline: Identifying the existing status and boundaries of the LMEs in the Western Indian Ocean region (You cannot manage what you haven't measured)
2. Impacts and Causes: Agreeing on the main threats to the ecosystem, its living resources and the communities that depend on them and identifying specific areas of concern that need observing
3. Monitoring: Developing an effective monitoring and early warning mechanism for ecosystem variability and climate change, building on the baseline surveys and adopting appropriate indicators of change (You cannot adapt to change unless you can recognise change)
4. Science-to-Governance: Translating the outputs from this monitoring into policy and management level priorities and guidelines for adaptive management and decision-making
5. Cooperative Management: Evolving and adopting a Western Indian Ocean Alliance of partners to achieve sustainability of monitoring and adaptive management within the LMEs using the ecosystem approach

BASELINE DATA

Sufficient data and information collected now to start an effective monitoring programme – at least in the southern 'low-risk' section. Gaps continue to be filled as and when possible



LONG-TERM MONITORING

Indicators of Ecosystem Health and welfare currently under selection (including socio-economic and community welfare indicators)

National and regional ecosystem monitoring programmes are currently being finalised in parallel with capacity building and training programmes

Science-Based Governance and Cooperative Management

So what do we do now with all of this incoming data and monitoring of changes in view of the urgency with which management and governance at the national and regional level need guidance and advice?

How do we feed the information to where it is needed most in order to manage these marine ecosystems effectively and sustainably?

Translating Science-to-Governance
The Disconnect

Often scientific results are not entirely conclusive and there is a tendency to want to do more studies on the same topic to refine the conclusions (achieving reliable Confidence Limits)

In terms of Marine Ecosystem management we need to embrace the Precautionary Approach, but we need to go further and develop a mechanism that can arrive at a 'Weight of Evidence' that is:

A. Accepted by a comprehensive group of scientific peers (including social scientists and economists etc.) to be reliable enough to guide management decisions and..

B. Upon which decision-makers can act immediately while accepting that the science may need further 'fine-tuning'

One very real challenge will be developing the skill-set that can define the reliable 'Weight of Evidence' and can translate existing science into 'Confident' advice for policy-makers and managers

THE CONFIDENCE-BASED APPROACH

Whereby conclusions are drawn based on mathematically-proven 95% or 99% confidence limits in the scientific data and findings

Problem:

Scientists are highly confident in their conclusions and predictions and the end-results are very reliable…

HOWEVER, it usually requires detailed and repetitive studies over a long time period

Managers and Policy-Makers cannot risk waiting for these 'high-confidence' conclusions and have to act faster to protect the interests of their 'stakeholders' (primarily the community at large)

THE PRECAUTIONARY APPROACH

If in doubt, adopt a cautious position based on a 'worse-case' scenario

Problem:

Managers are uncomfortable at basing their management plans/strategies on what is often seen as 'supposition' or limited observation with limited supportive scientific evidence

Policy-Makers do not feel fully justified in making policy decisions which may threaten or impact on other social or economic priorities unless they have reliable 'justification' (clear advice from scientists) to support their decisions

Scientists are therefore understandable nervous about 'sticking their necks out' and provide advice/guidance based on anything less than very high confidence limits (95% +)

A Science-Based Adaptive Management Approach

A MORE 'DYNAMIC MANAGEMENT' APPROACH

A. Moving immediately forward from the Precautionary approach to identify appropriate Indicators that will provide an early 'indication' of trends

B. Seek to establish a Weight-of-Evidence that scientists and their peers feel comfortable in agreeing defines a clear indication or trend - and which can give managers and policy-makers sufficient confidence upon which to act (even if not 95% certain)

C. Use this WoE to initiate predictive modelling to support conclusions and upon which to compare continued monitoring of Indicators

D. Fine-tune models over time and thus improve guidance to Managers and Policy-Makers as move toward acceptable confidence limits

Comparing Approaches

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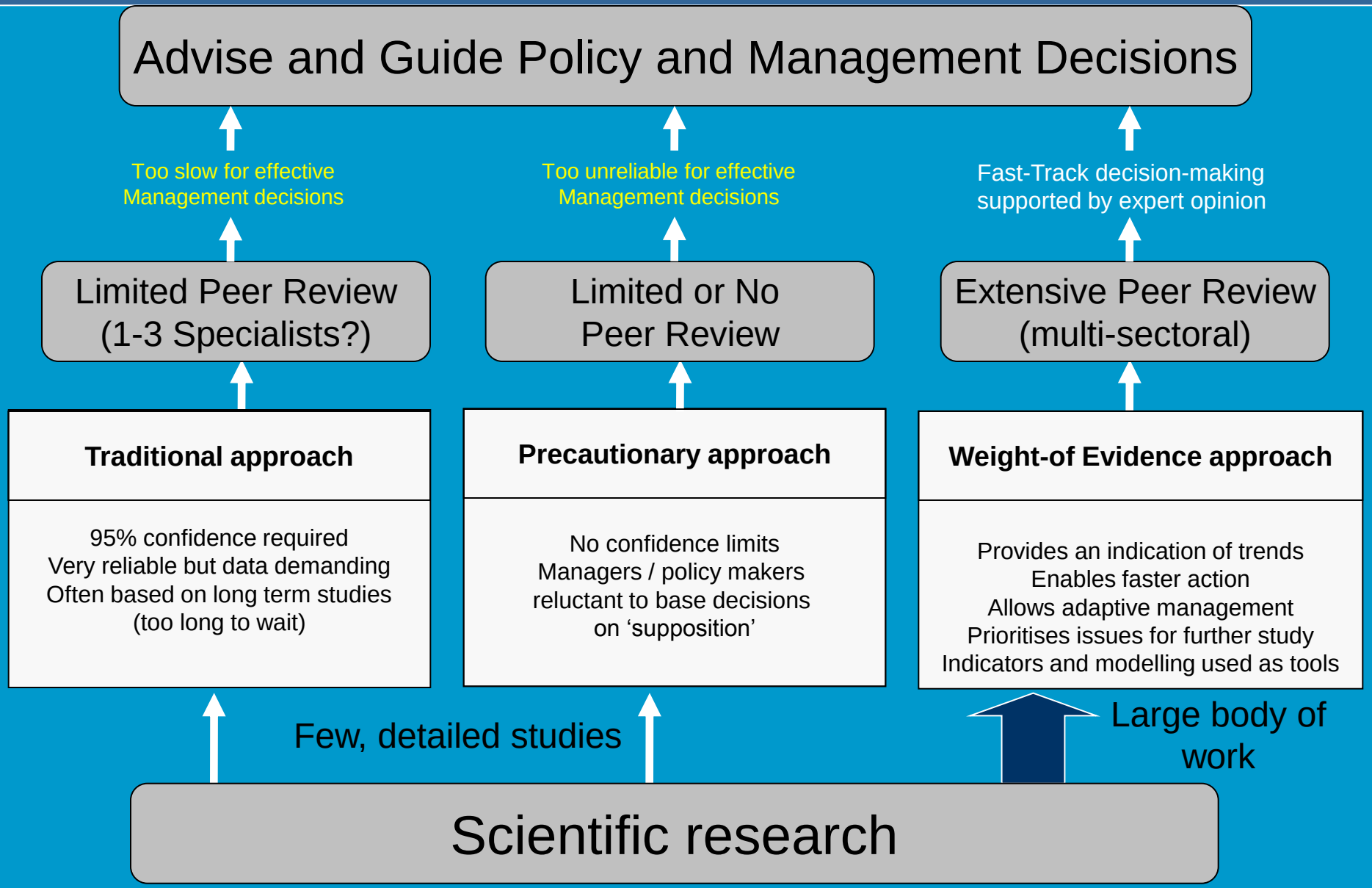

Advantages of this Dynamic Management Approach

The Advantages to the Scientific Community

This will raise the profile and importance of science generally in the policy-making and management process and encourage more support and funding to arrive at more reliable results as quickly as possible

It will also provide more precise guidance to the scientific community on which areas of research are priority and most likely, therefore, to attract funding

The Advantages to the Policy-makers

This approach will take decision-making beyond the 'precautionary' approach which is often seen as being based more on supposition than strong evidence and which therefore leaves policy-makers feeling vulnerable and indecisive

It will also provide senior government leaders at the economic/finance level and management level with clearer guidance on where to prioritise activities and funding in terms of both immediate management needs and further research (this also extends to the funding agencies of course)

Delivering the Dynamic Management Approach

HOW do we do this?

What sort of process or vehicle can we create that can make this Dynamic approach work in terms of taking the information from the scientists to the management and governance users?

How can we produce a feedback process that helps managers and policy-makers to define their priorities?

How do we encourage scientists to release/share their important findings at an earlier stage and then further encourage and help them to achieve reliable confidence limits?

The Weight-of-Evidence Cycle

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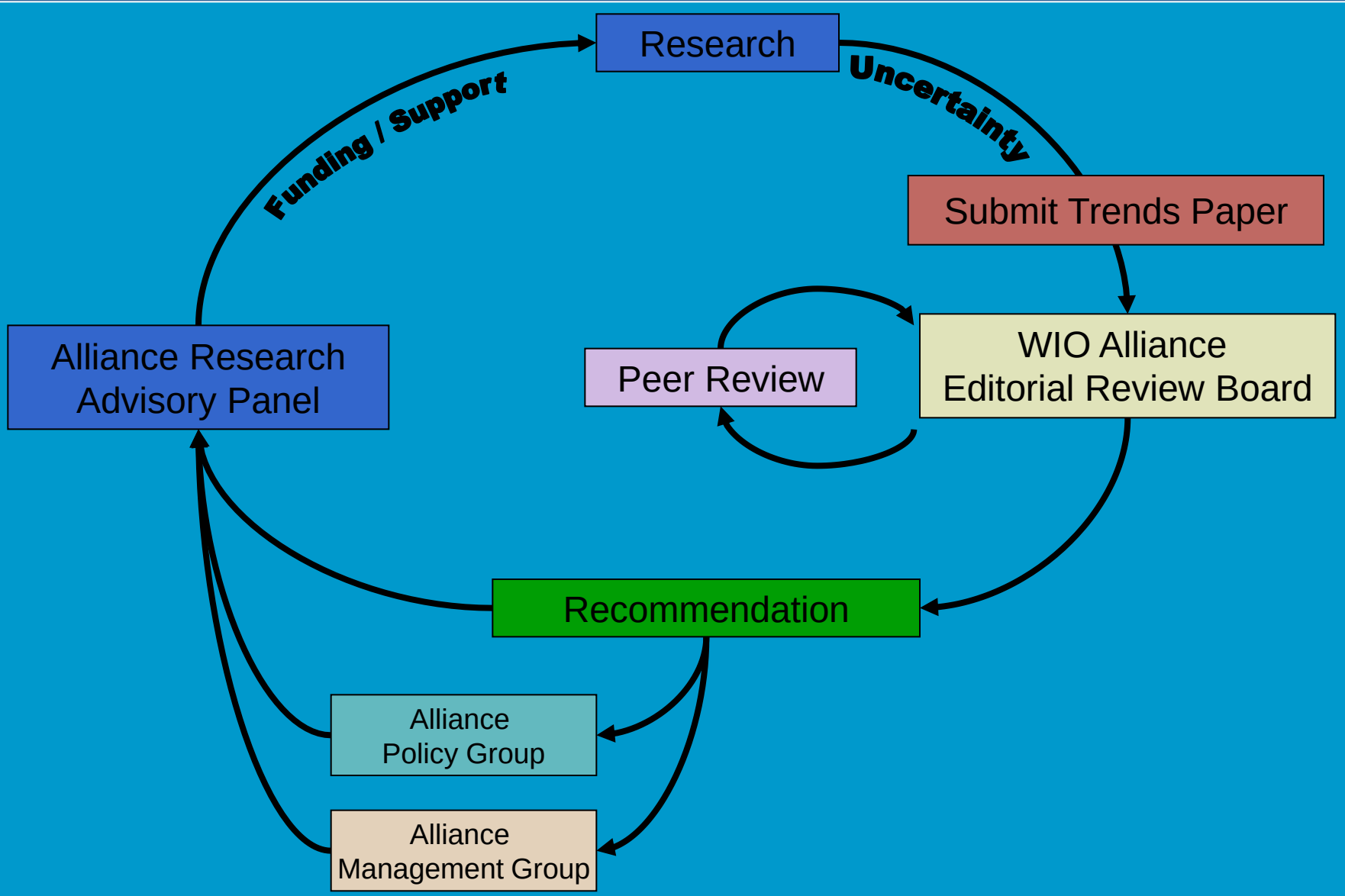

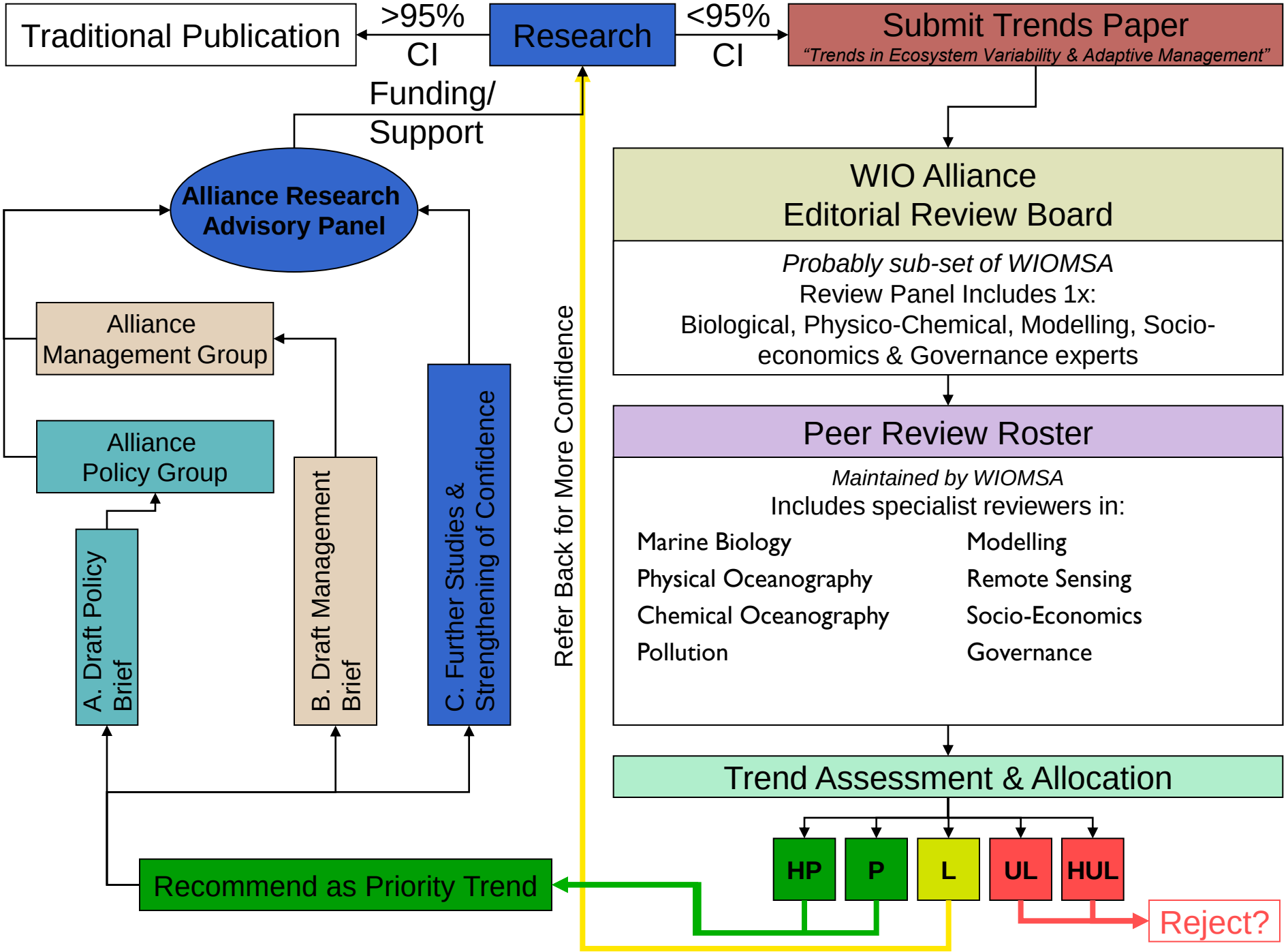
Traditional Publication
>95% CI
Research
<95% CI
Submit Trends Paper
"Trends in Ecosystem Variability & Adaptive Management"
Funding/ Support
Alliance Research Advisory Panel
WIO Alliance Editorial Review Board
Probably sub-set of WIOMSA
Review Panel Includes 1x:
Biological, Physico-Chemical, Modelling, Socio-economics & Governance experts
Alliance Management Group
Alliance Policy Group
A. Draft Policy Brief
B. Draft Management Brief
C. Further Studies & Strengthening of Confidence
Refer Back for More Confidence
Peer Review Roster
Maintained by WIOMSA
Includes specialist reviewers in:
Marine Biology
Physical Oceanography
Chemical Oceanography
Pollution
Modelling
Remote Sensing
Socio-Economics
Governance
Trend Assessment & Allocation
HP
P
L
UL
HUL
Recommend as Priority Trend
Reject?

The Alliance Concept

In order to make all of this work we are building partnerships and agreements for 'responsibilities' throughout the ASCLME region. This is now known as WIOSEA (Western Indian Ocean Sustainable Ecosystem Alliance)

This Alliance aims to create sustainability through partnerships addressing critically important activities for LME management and governance.

The Alliance 'pools' resources and shares activities

The Alliance is anchored around a number of components, including:

- A Scientific/Technical Component for long-term monitoring of the ecosystem and associated impacts and to deliver 'translated' scientific guidance
- A Capacity Building and Training Component that strengthens skills and available methodologies at the institutional level
- A Policy/Steering Component that guides the process and provides feedback to the scientific and technical component on priorities and needs (national and regional)

N.B. Financing of management focuses primarily on the use of existing allocated funds and activities and rationalising / targeting these within the Alliance group

The Scientific and Technical Component of the Alliance

This includes existing agreements and partnerships for long-term monitoring of the ecosystem and impacts. These will become coordinated, multilateral agreements through the Alliance.

It also involves the identification of ‘gaps’ in science, data capture and monitoring and the subsequent negotiation and adoption of further agreements through the Alliance to address these gaps.

Various partners within the Alliance are already taking responsibility for funding and delivery for specific activities (e.g. Monitoring of Indicators for Ecosystem Changes and Climate Variability, Data Analysis, Modelling, Publishing of Ecosystem Atlases, etc)

The Alliance will also provide a proactive role in ensuring effective packaging and delivery of scientific conclusions and management options to national and regional managers and policy-makers

An important responsibility of this component will be scientific and technical peer review and identification of ‘trends’ in the data for prioritisation of further studies and monitoring

The Capacity Building and Training Component of the Alliance

For the Scientific Component to be effective in terms of a regional monitoring and management approach, there needs to be a strong emphasis on CB&T in the region

This CB&T needs to focus on strengthening institutional capacities as much as individuals so that the 'investment' and skills are not lost with career moves by trained personnel

ASCLME and partners have already assisted each country in the region with the development of national CB&T plans and these will be extended into a regional CB&T road-map

The Alliance is developing agreements with regional academic and commercial institutions to fulfil much of these CB&T requirements, probably through a 'Centres-of-Excellence' approach

Financing the Alliance

The Alliance focuses primarily on the use of existing allocated funds and activities and rationalising / targeting these within the Alliance group to ensure that there is an identified responsible entity or organisation addressing each priority activity and avoiding duplication of funding and effort

I.E. where a particular interested agency of body has funds to undertake specific activities within their agreed work-plan, the Alliance would aim to reach an agreement with that agency or body to accept responsibility within the overall ‘partnership’ to deliver on those activities

However, it can be expected that an effective working Alliance will also attract further funding and interest either from existing or new partners, especially for ‘gap’ activities (this is already happening)

The Alliance at the Policy Level

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A Regional Alliance based on National Foundations

For such a regional Alliance to be successful it needs to be mirrored at the national level

The ASCLME project and its partners are now working to develop Alliance-type partnerships within the nationally-mandated organisations in each country

We are also starting to roll-out the Dynamic Management and Science-Based Governance approach at a country level through national roundtables that seek country feedback related to specific national management constraints and institutional needs and aim to build ownership and to evolve the process by 'demonstration'.

Furthermore, we are working to include the communities into this Governance process. Pilot communities have already been involved at the Baseline level and will be involved in the development of Indicators.

Local Development Plans have been drafted that identify opportunities for targeted investment to address priority issues identified by communities such as diversification of livelihoods, understanding and responding to climate change impacts, etc.

Some Advantages of the 'Alliance' Approach

- Avoids a complex, expensive new over-arching body for LME management and governance. A simple coordination & facilitation mechanism will be sufficient
- Full recognition and engagement of existing mandates and entities (both nationally and regionally) that are already responsible for many of the management and governance activities
- Efficient coordination within and between countries and various entities which will result in more efficient use of limited human resources and more cost-effective use of limited funds
- A strong, well-organised and united focus for leveraging further funding to enhance existing activities and to provide additional funding for prioritised 'gaps'
- Stronger and more coordinated emphasis on the translation of scientific conclusions into effective management and supportive policy-making decisions

From Regional to Global?

Similarly, we are seeing new global level Alliances coming into play at a most appropriate time. Two very recent ones…

- Global Partnership for Oceans (recently launched by the World Bank and its partners)
- The Future Oceans Alliance (announced at the Planet Under Pressure Conference in London last week by a consortium of scientists, policy-makers and agency leaders and to be formally launched at Rio + 20)

There is every reason to expect that regional Alliances can cooperate and support such global Alliances and *vice versa* (in the same way as such Alliance partnerships at the regional level need to be supported from the national level)

In fact, we believe that the regional Alliances such as the Western Indian Ocean Sustainable Ecosystem Alliance and its Dynamic Management Approach can act as a standard-bearer to demonstrate (through best lessons and practices) one mechanism for the effective evolution of science-based governance and LME management


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Moving in the Right Direction?
We Hope So!!