



Contribution to the Symposium: 'Marine Socio-ecological Systems Symposium'

Quo Vadimus

Managing marine socio-ecological systems: picturing the future

Olivier Thébaud^{1*}, Jason S. Link², Bas Kohler³, Marloes Kraan⁴, Romain López⁵, Jan Jaap Poos⁴, Jörn O. Schmidt⁶, and David C. Smith^{7,8}

¹Ifremer, Univ Brest, CNRS, UMR 6308, AMURE, Unité d'Economie Maritime, IUEM, F-29280, Plouzane, France

²National Marine Fisheries Service, National Oceanic and Atmospheric Administration, 166 Water Street, Woods Hole, MA 02543, USA

³Studio Bas Kolher, Binnenbantammerstraat 1, 1011 CH, Amsterdam, The Netherlands

⁴Wageningen Marine Research, PO Box 68, 1970 AB IJmuiden, The Netherlands

⁵University of Brest, France

⁶Environmental, Resource and Ecological Economics, Kiel Marine Science and Cluster of Excellence 'Future Ocean', Kiel University, 24118 Kiel, Germany

⁷CSIRO Oceans and Atmosphere, Castray Esplanade, Hobart, Tasmania 7001, Australia

⁸Centre for Marine Socio-ecology, University of Tasmania, Hobart, Tasmania 7001, Australia

*Corresponding author: email: olivier.thebaud@ifremer.fr

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What do you get when a lawyer, a modeller, an economist, a social scientist and an ecologist talk about the ocean? Besides an interesting conversation, it is likely there will be some consideration of how to solve many of the problems facing marine ecosystems around the world. That is precisely what the MSEAS 2016 symposium on understanding marine socio-ecological systems aimed to do. From 30 May to 3 June in Brest, France, the symposium gathered over 230 participants from around the world and from multiple disciplines to discuss the challenge of explicitly considering the human component in producing synoptic assessments of marine social-ecological systems. The symposium fostered dynamic debates on the inter-disciplinary collaborations needed to support management of ongoing and anticipated growth in multiple ocean uses, with particular consideration of the triple bottom line of ecological, economic and social sustainability. Building on the illustrations produced by a professional cartoonist during the meeting, this graphic novel summarizes the key challenges ahead in understanding marine socio-ecological systems and draws a path for future research endeavours in this domain.

Managing marine socio-ecological systems: picturing the future.

Olivier Thébaud, Ifremer, UMR AMURE, France

Jason Link, NOAA, USA

Bas Kolher, Studio Bas Kolher, The Netherlands

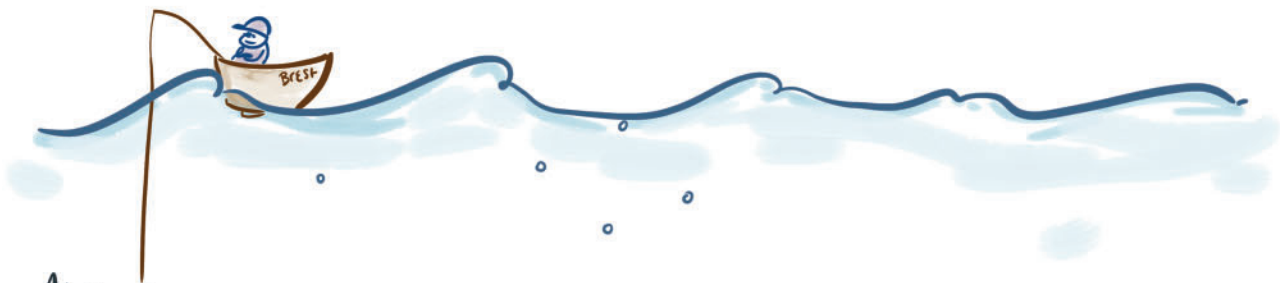
Marloes Kraan, Wageningen Marine Research, The Netherlands

Romain López, University of Brest, France

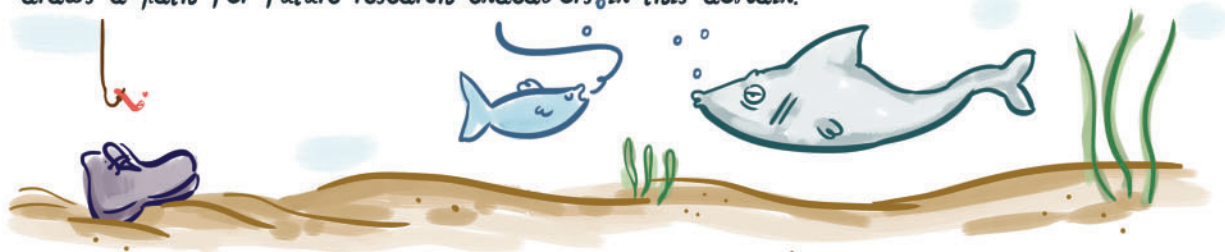
Jan Jaap Poos, Wageningen Marine Research, The Netherlands

Jörn Schmidt, University of Kiel, Germany

David Smith, CSIRO, Australia



Abstract: What do you get when a lawyer, a modeler, an economist, a social scientist and an ecologist talk about the ocean? Besides an interesting conversation, it is likely there will be some consideration of how to solve many of the problems facing marine ecosystems around the world. That is precisely what the MSEAS 2016 symposium on understanding marine socio-ecological systems aimed to do. From May 30th to June 3rd in Brest, France the symposium gathered over 250 participants from around the world and from multiple disciplines to discuss the challenge of explicitly considering the human component in producing synoptic assessments of marine social-ecological systems. The symposium fostered dynamic debates on the inter-disciplinary collaborations needed to support management of ongoing and anticipated growth in multiple ocean uses, with particular consideration of the triple bottom line of ecological, economic and social sustainability. Building on the illustrations produced by a professional cartoonist during the meeting, this graphic novel summarizes the key challenges ahead in understanding marine socio-ecological systems, and draws a path for future research endeavors in this domain.



The Oceans offer many opportunities:



Be it fishing,



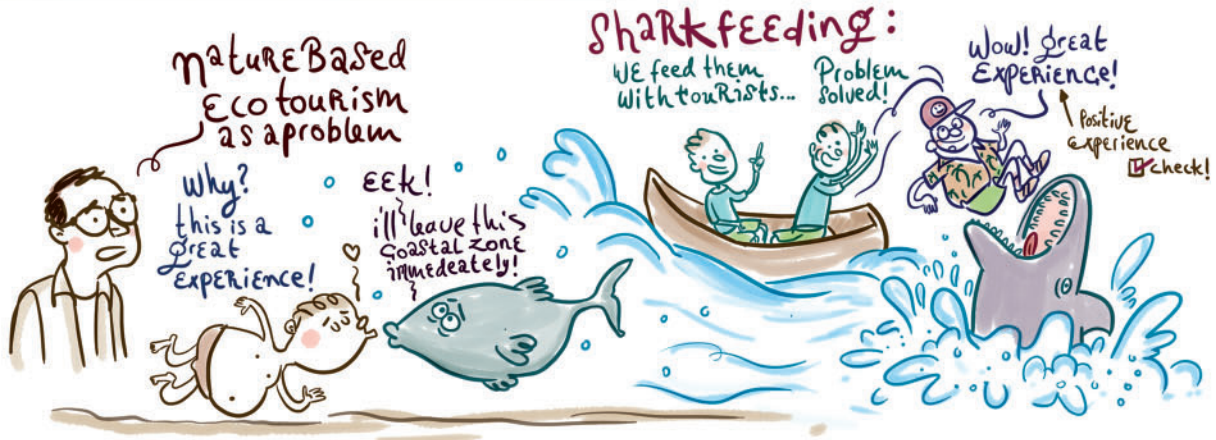
Food Provision,



Seabed mining and the development of offshore constructions,



Tourism and cultural services



or shipping, energy,
and many other sectors ...

But the Oceans also
face many challenges.

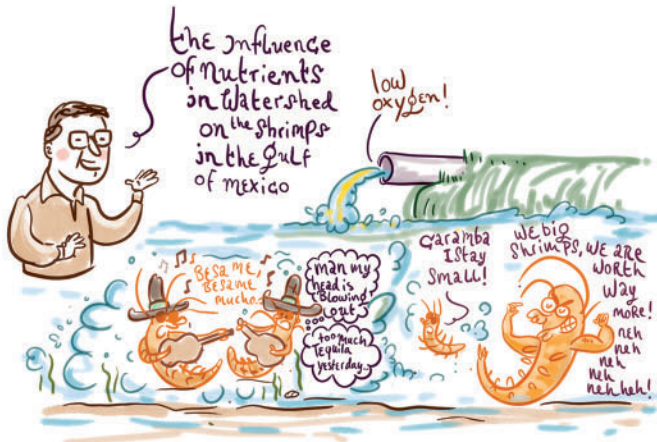


Climate change.



pollution.

cumulative threats
on ecosystem services.



Ecosystem services (es) as a common currency?



ATC

All requiring integrated management beyond fish and fisheries ...



To address all these issues at once, we need to adopt an Ecosystem Approach.

that is interdisciplinary.

and that engages stakeholders.

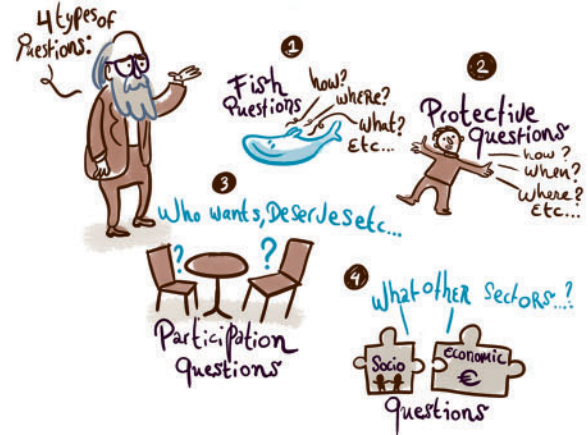


Finding solutions to problems facing the ocean is complex and adventurous

because of the range and nature of the issues involved



Particularly because humans are part of the ecosystem too.



And scientists, policy-makers and other stakeholders are connected through social networks.



The solutions also need to be integrated across multiple dimensions:

the economic dimensions,



the social dimensions,



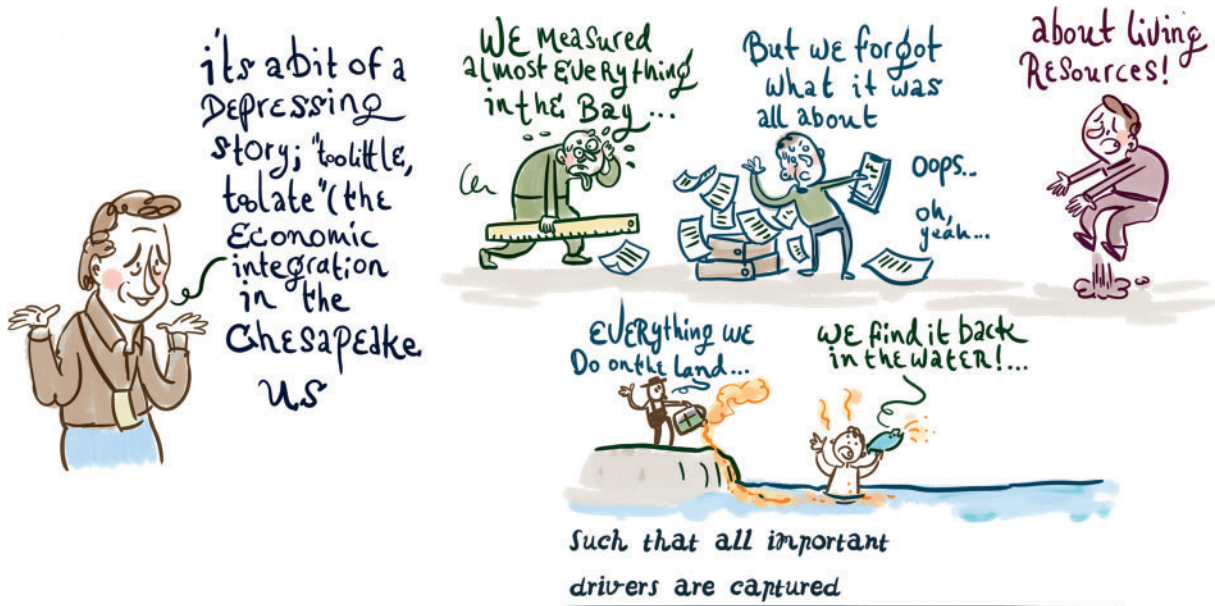
the governance dimensions,



the political dimensions.



and the ecological dimensions.



All need to be considered in ways more than just the usual set of expert opinions.

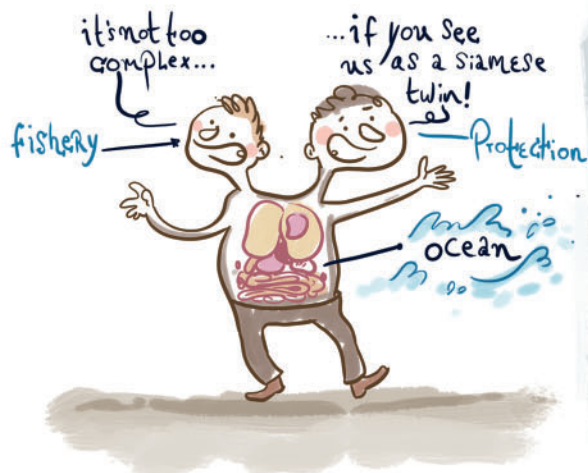


Certainly there will always be challenges facing research on marine socio-ecological systems.



Even if just making sense of all the multiple objectives,

and collecting sufficient and relevant data



Handwritten signature or initials.

Data from the right places (geographically and disciplinarily)... and worth the effort.



Where such data can be converted into indicators



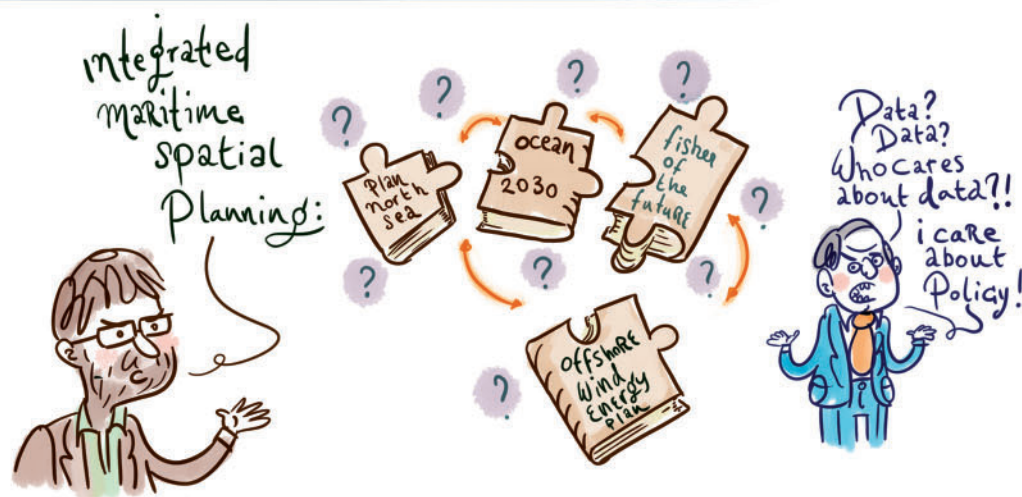
that can inform decisions,



i dont feel well since they put us in this well being matrix

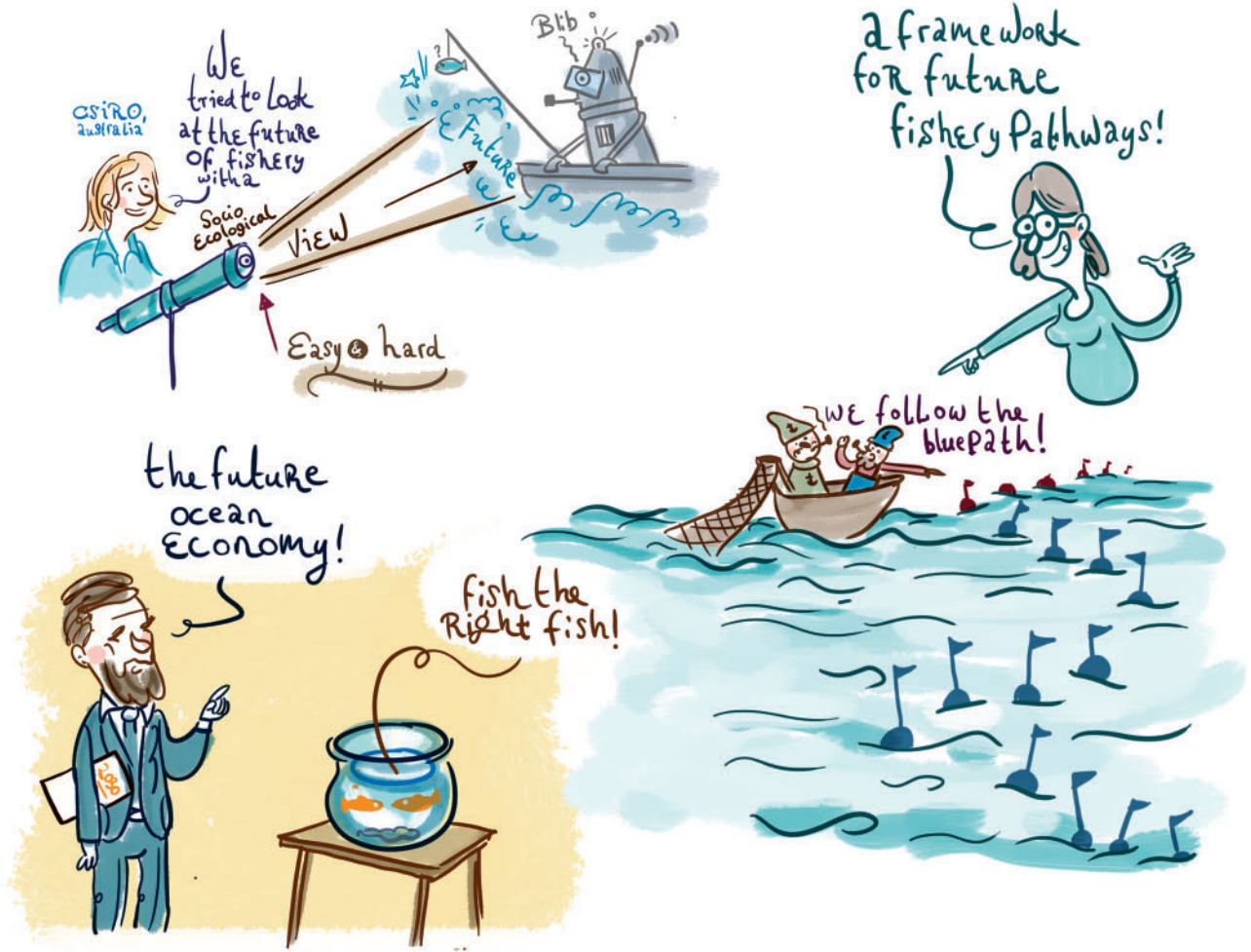


In the context of integrated maritime policies ...



AA

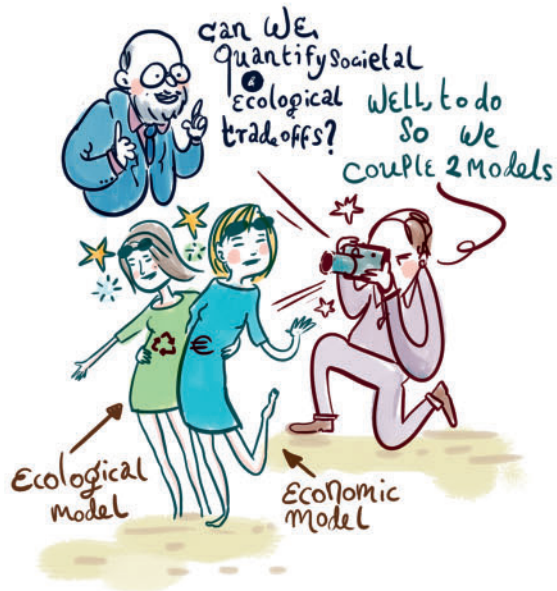
But as we seek to manage uses of the ocean, we can envision a future



that will use a wide range of models.



Models that are highly coupled,



Models that account for human diversity,



and that include human behavior,



and that are easy to develop and communicate.



Models that are trusted and used by stakeholders.



while managing expectations ...

People who are too enthusiastic about models



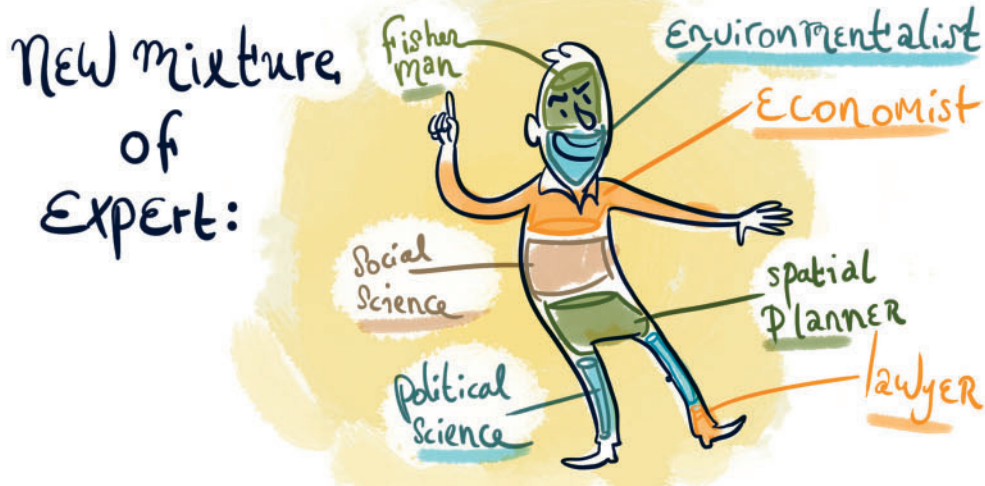
People who are too sceptical about models



And models that are put into context.



This future will need to be highly interdisciplinary, with a wide range of expertise.



All in the context of flexible and adaptive governance systems and legislation.

legislation, then now:

in the old days it used to be all about us...

now it's so complex with all these modern Ocean functions and users!



that take a balanced view of individual versus collective outcomes.

Importance of Holistic view:



and of trade-offs between
immediate and future outcomes.



Too much is at stake not to try
to achieve such a future ...
MSEAS 2016



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