

The future aquaculture and balanced ecosystembased management of the oceans

Jens Christian Holst

Potential of the oceans?

- Current harvest from the oceans has leveled off around 90 million tonnes, aquaculture closing 70 mt and growing

World capture fisheries and aquaculture production

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Aquaculture

- Large potential
- Future industrial aquaculture
 - No footprint principle
 - No ecologic debt
 - Closed containment
 - Integrated
 - (Take weight off wild overexploited stocks)
- Three main feed sources
 - Wild marine (from a balanced ecosystembased harvest)
 - Agriculture
 - Intensive systems

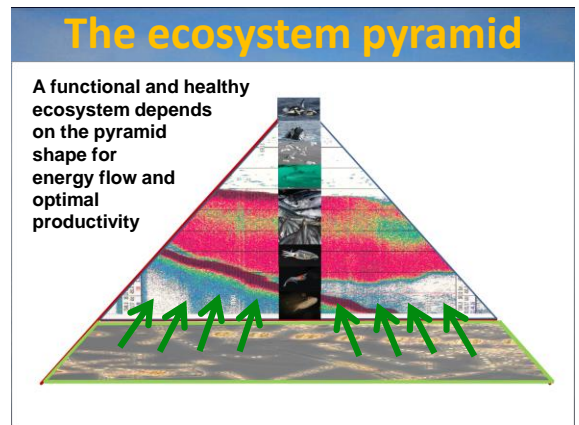
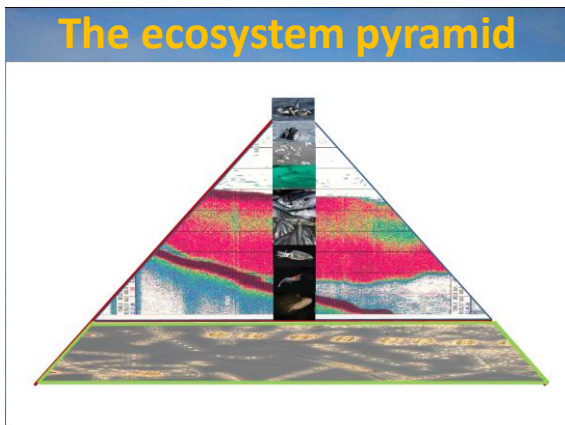
Balanced harvesting

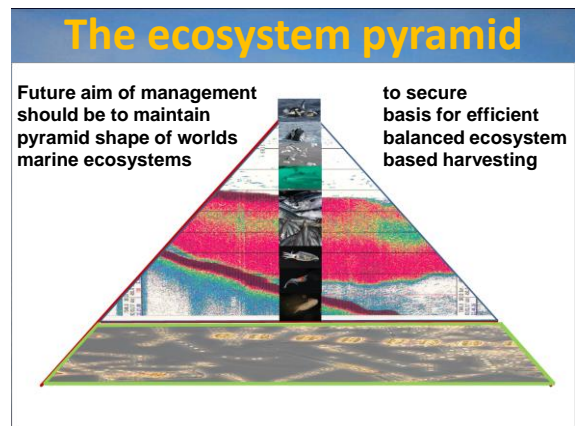
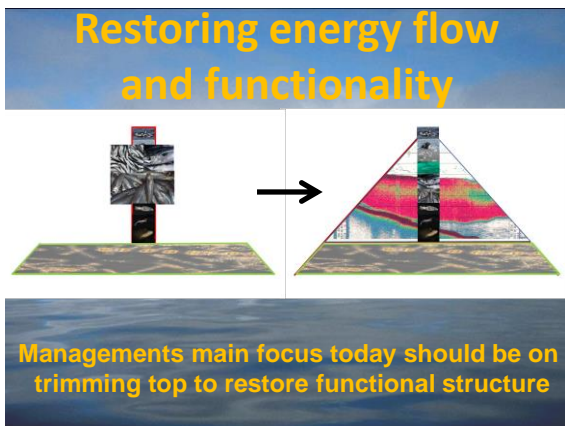
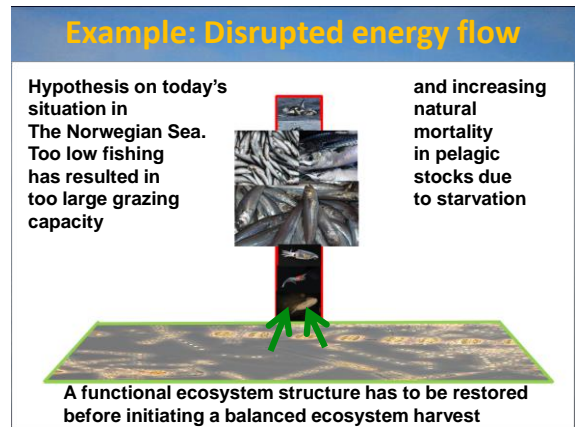
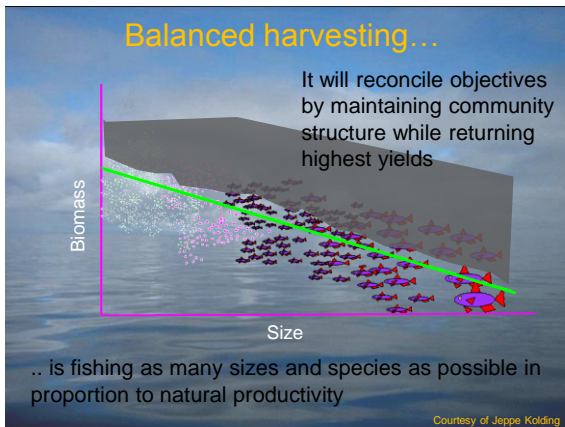
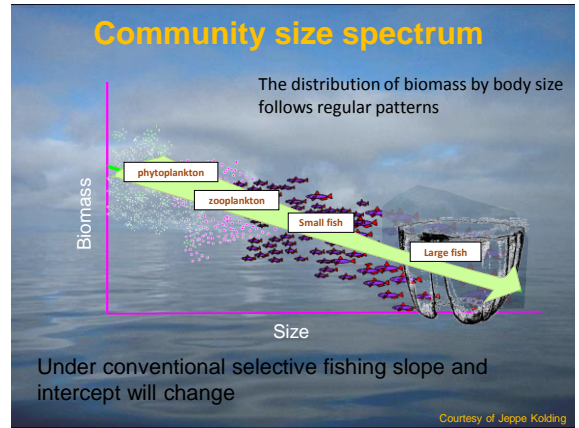
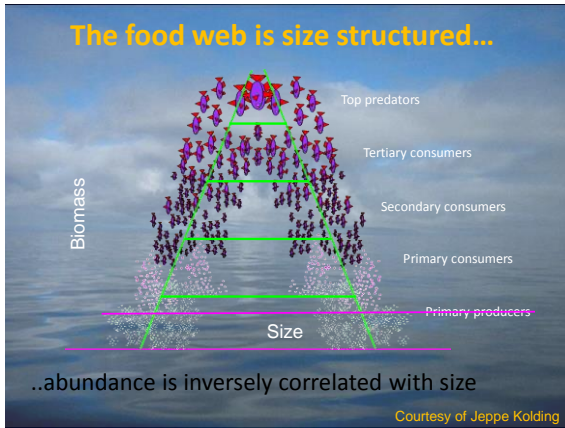
CONSERVATION

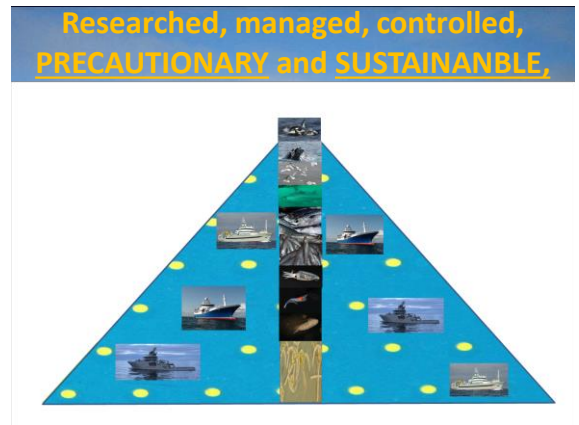
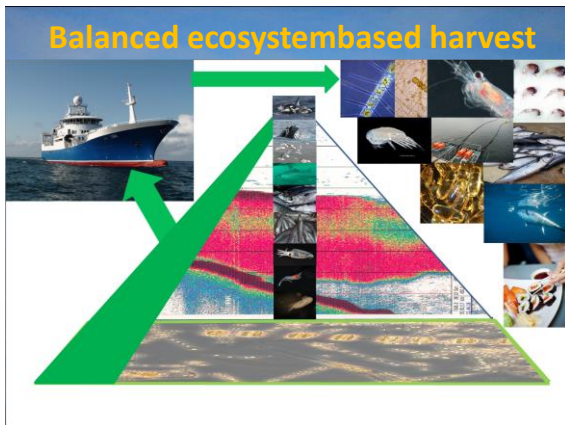
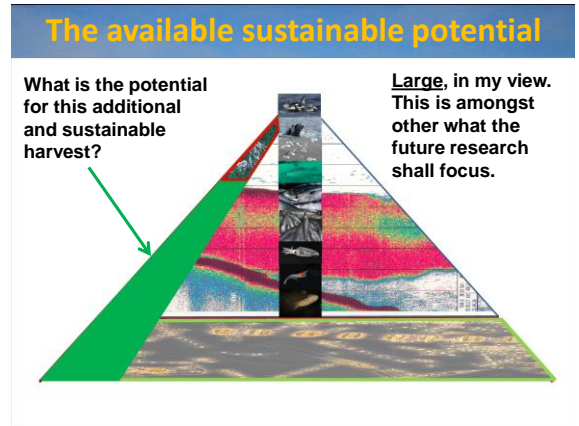
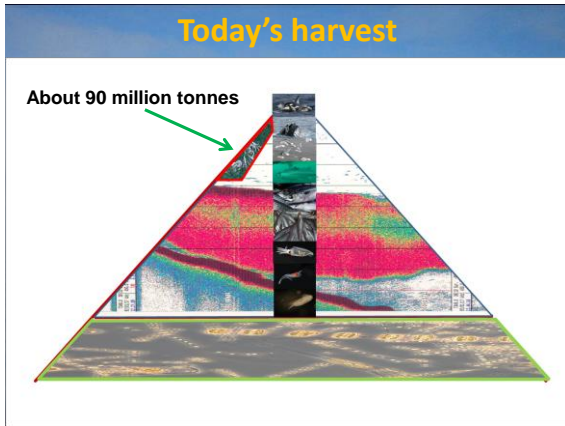
Reconsidering the Consequences of Selective Fisheries

S. M. Garcia,^{1*} J. Kolding,^{12*} J. Rice,^{13*} M.-J. Rochet,^{4**} S. Zhou,^{5*} T. Arimoto,⁶ J. E. Beyer,⁷ L. Borges,⁸ A. Bundy,⁹ D. Dunn,¹⁰ E. A. Fulton,¹¹ M. Hall,¹² M. Heino,^{2,13,14} R. Law,¹⁵ M. Makino,^{1,16} A. D. Rijnsdorp,¹⁷ F. Simard,¹⁸ A. D. M. Smith¹¹

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- ### Controversial
- This is an hypothesis and it needs to be tested
 - It's not the role of today's science and management to rejects hypothesis testing because "it's unknown"
 - The principles needs to be tested in a controlled manner in real marine ecosystems, then evaluated based on the empiric data derived
 - Acceptable or not acceptable

Some prerequisites for implementation

- Profound changes in
 - International cooperation
 - Better coordination and strong growth of research
 - Educate new generation of scientists
 - Take the best from the old research, management control and harvest into the new regime
 - Develop new fishing and real time production methods
 - Develop new products and markets
 - Closer coordination of fisheries and aquaculture
 - Consumer in focus
 - ++++

Suggestion for project

- Large long term international project to develop and evaluate various aspects of implementation
 - Parallel development of methods in all branches involved
 - Descriptive and quantitative mapping of area
 - Build combined ecosystem and harvesting model
 - Start a balanced ecosystem based harvest and follow ecosystem development closely
 - Collect empiric data from ecosystem and catches for model
 - Evaluate catch and ecosystem development
 - AND THEN: Conclude

Today's challenge to the Pelagic RAC:

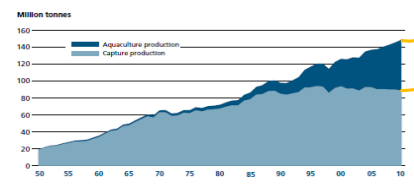
Together with the EU, organize and run an international conference with the aim to get the ball running!

Potential of the oceans?

How far?

I don't know but we should focus the potential of a future more sustainable aquaculture and harvest of the oceans now!

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Thank you!