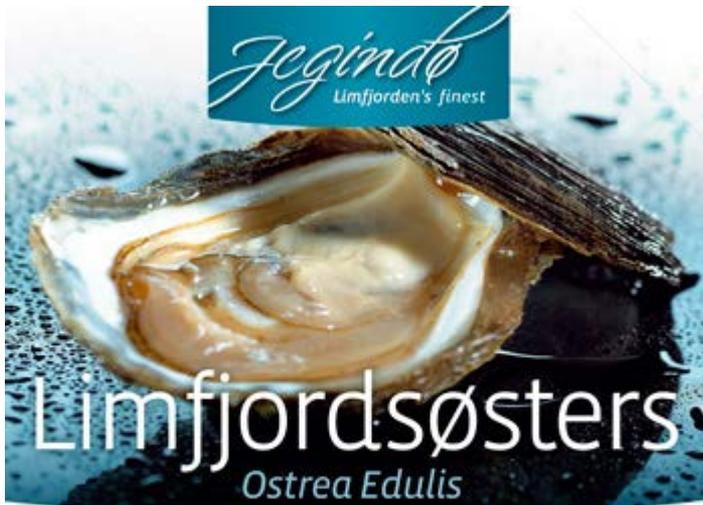


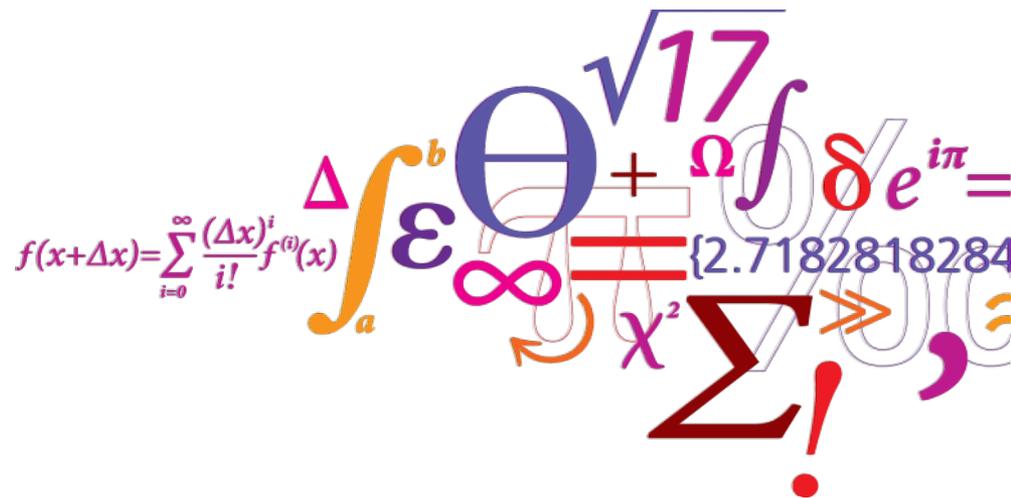
Social LCA Scenarios: Engaging producers and consumers in new domestic oyster value chains in Denmark

4th International Seminar in Social LCA, November 19-21, 2014, Montpellier, France

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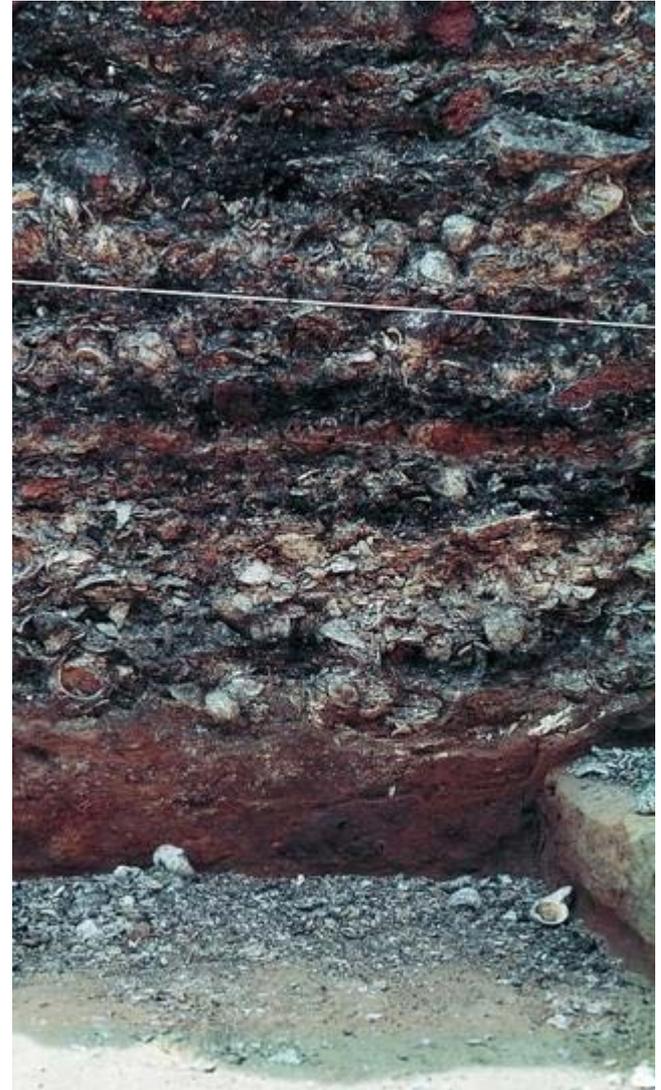
Friske danske østers Färska danska ostron
Frische dänische Austern Fresh Danish oysters



An essential food item in Southern Scandinavia

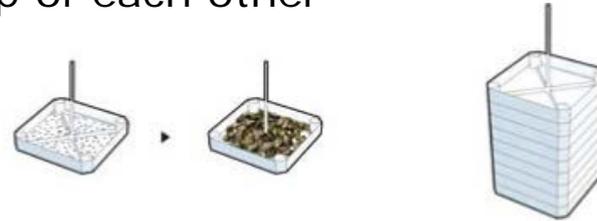
Today, Danes only consume 50,000 oysters per year, most of which are imported

Native oysters are mainly exported as high priced delicacies to Southern Europe

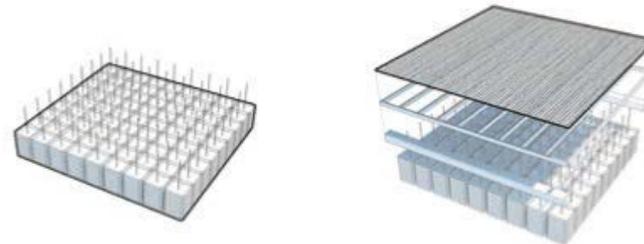




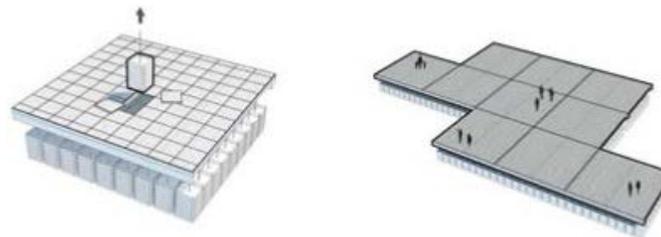
Just below the surface, small oysters are placed in a basket. They grow in the water for 2-3 years then are ready for harvesting
Several baskets are hanging on top of each other



The baskets are joined together on a floating platform constructed in a way so that the baskets can be taken up and inspected

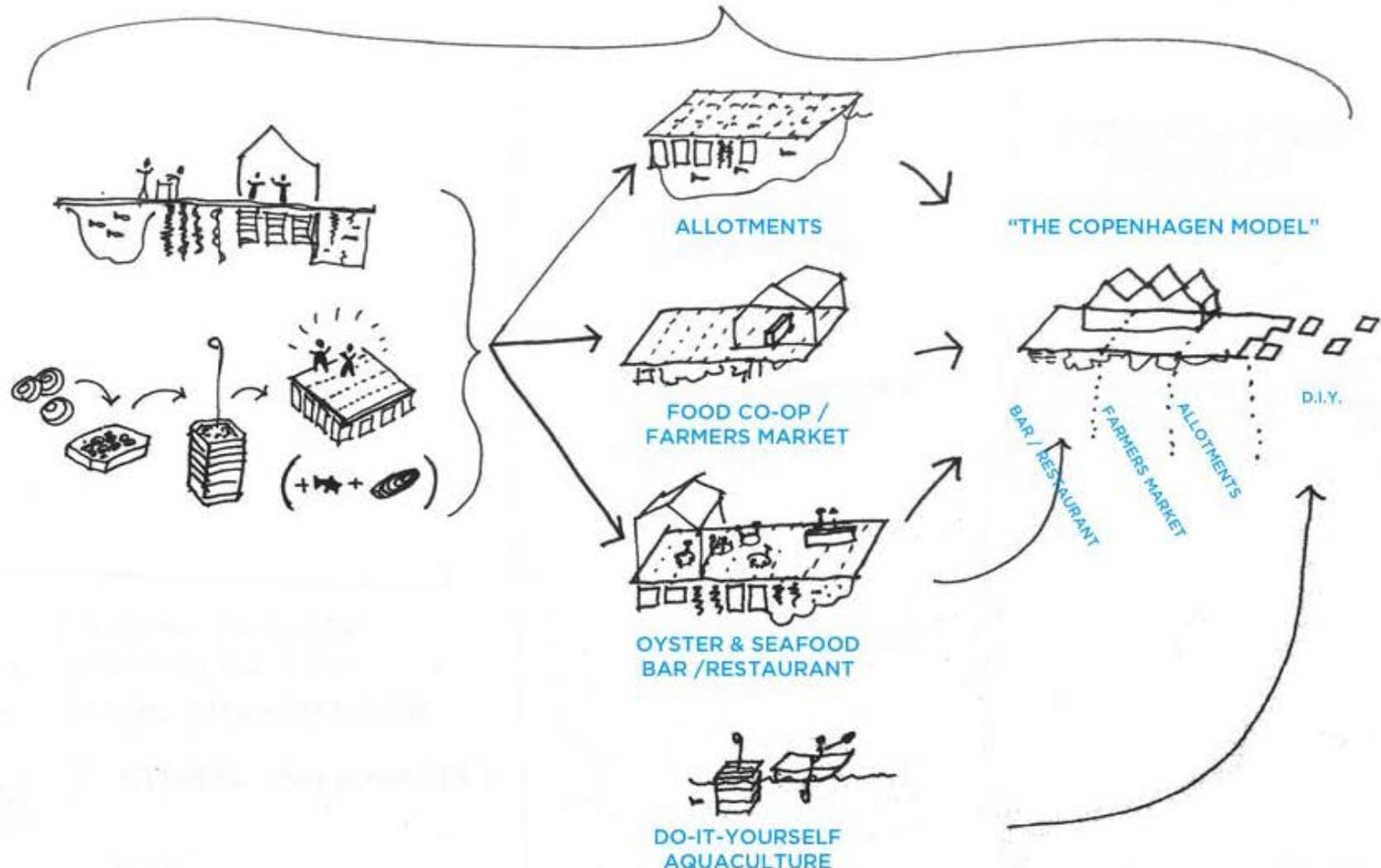


On top of the platform, a swimming facility, a restaurant or a mini maritime experience centre can be built





HARBOURFARM



URBAN
AQUACULTURE &
RECREATION

ORGANIZATION
(BUSINESS CASE)

VISION
(REALIZATION)

Simplified, localized life cycle

Experiments in the harbours of Copenhagen, Ebeltoft and Fredericia collapsing a highly stratified production, distribution and consumption process

A move for “democratization” of oysters to increase domestic production and consumption targets aquaculture of oysters - run as maritime kitchen gardens by an association of citizens, accompanied by pop-up oyster serving initiatives, encouraged through educational partnerships with schools and supported via trend-setting chefs and gourmet bloggers

The essence of ecological food

**organic extractive, no artificial food input from the farmer
the oysters filter sea water in capturing plankton feed
as water quality is regenerated, habitats are restored**

Nutritious: Omega3, zinc, iron, calcium

The concept of Human Capital vs. Sen's concept of Human Capabilities

The concept of human capital focuses on 'the agency of human beings - through skill and knowledge as well as effort - in augmenting production possibilities' (Sen 1997, 1959).

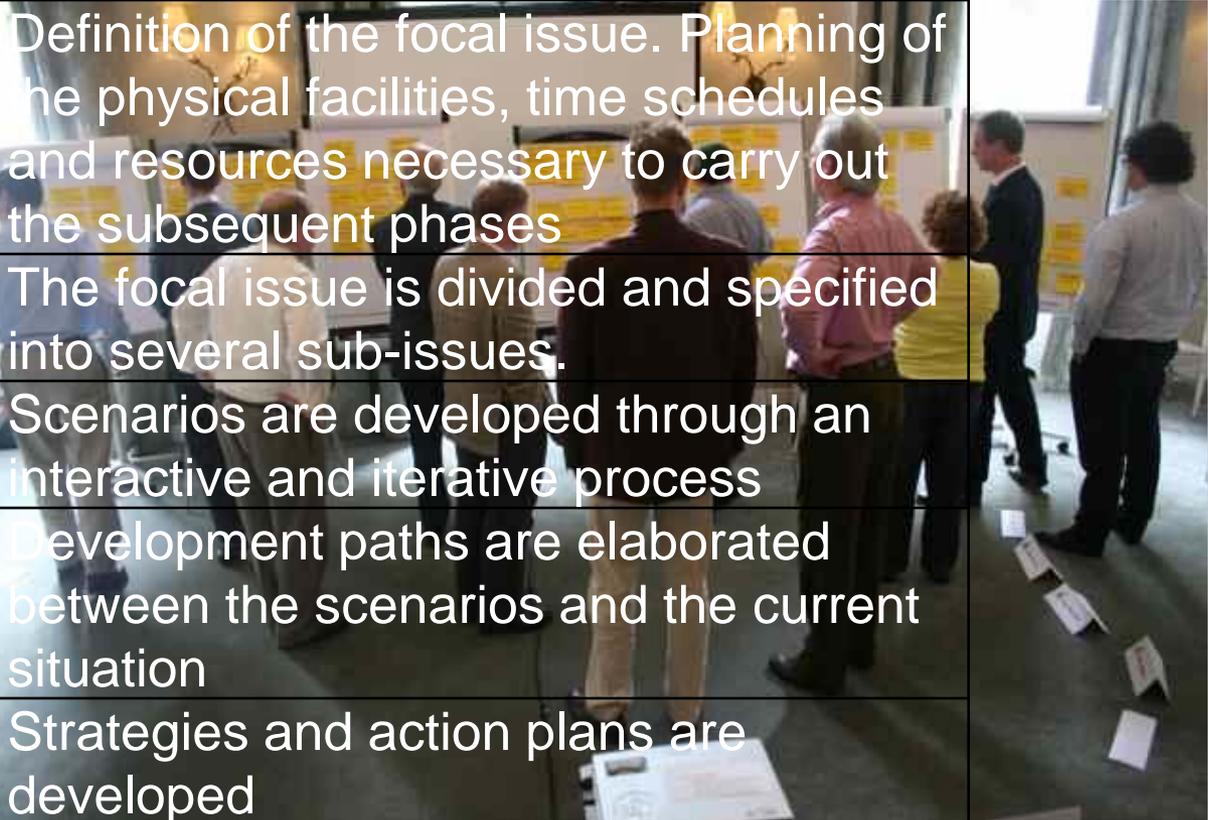
Sen's concept of human capabilities has a wider scope; he points to 'their direct relevance to the well-being and freedom of people; their indirect role through influencing economic production; and their indirect role through influencing social change' (Sen 1997, 1960).

Nussbaum's (2003) Ten Central Capabilities

	Capabilities	Definition (abbreviated)	Oyster value chain
1	Life	Live a life of normal length	
2	Bodily health	Incl. reproductive health, nourished, shelter	Contributes to a nutritional diet
3	Bodily integrity	Move freely, secure against violent	New, open recreational spaces
4	Senses, imagination, thought	Use as informed by education, not limited to basic training	Culinary, aesthetic and heritage experience
5	Emotions	Attachment to things and people	Associating with neighbours and others
6	Practical reason	Engage in critical reflection of one's life	Debate food and health issues
7	Affiliation	Show concern for other humans social bases for self-respect	Be part of joint efforts to improve human well-being recognizing oneself and others as citizens
8	Other species	Concern for animals, plants, world of nature	Observe animal welfare and food ethics
9	Play	Being able to laugh, play, enjoy recreation	New community spaces for recreation
10	Control over one's environment	Participate effectively in political choices Property rights and right to employment on an equal basis	Ownership and command of value chain

Interactive Scenario Analysis

Constitutive phase	Definition of the focal issue. Planning of the physical facilities, time schedules and resources necessary to carry out the subsequent phases
Problem-focusing phase	The focal issue is divided and specified into several sub-issues.
Scenario-building phase	Scenarios are developed through an interactive and iterative process
Back-casting phase	Development paths are elaborated between the scenarios and the current situation
Action-planning phase	Strategies and action plans are developed



Concluding remarks

The suggestion is to integrate the assessment of social impacts as design criteria in the process of constructing the new oyster chain and its enabling environment

Stakeholders define normative statements in advance on desired positive social impacts to be achieved

Interactive scenario analysis explores the 'pathways' through the sequence of inputs, activities, outputs, outcomes and impacts

Thank you for your attention!



$$f(x+\Delta x) = \sum_{i=0}^{\infty} \frac{(\Delta x)^i}{i!} f^{(i)}(x)$$

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$$\sqrt{17}$$

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