FISHING PAST A TIPPING POINT –
CLIMATE CHANGES AND MEDIEVAL OVERFISHING DEPLETED BALTIC HERRING IN THE 16TH CENTURY

***Climate**, in combination with **social economic factors**, played a central role in the fishery's collapse.*

Where? Scania!

What? A fishery fails!
In the late Medieval, salted herring became one of the most important commodities in Europe, forming the basis for wealth and political power. The fishery based on Baltic autumn spawning herring. A combination of climate factors & overfishing critically contributed to its sudden collapse by the year 1570, with far-reaching socio-economic and ecological implications.

How? Context data!
As direct data on catches are lacking, we use demographic, economic, climate and political history context-data, e.g. toll-books, prices, market-volumes, salt production, legal frameworks, etc. to estimate a catch time-series from 800-1600. We identify 4 phases, which show similarity to collapses in modern fisheries: increase, stagnation, boom phase and collapse.

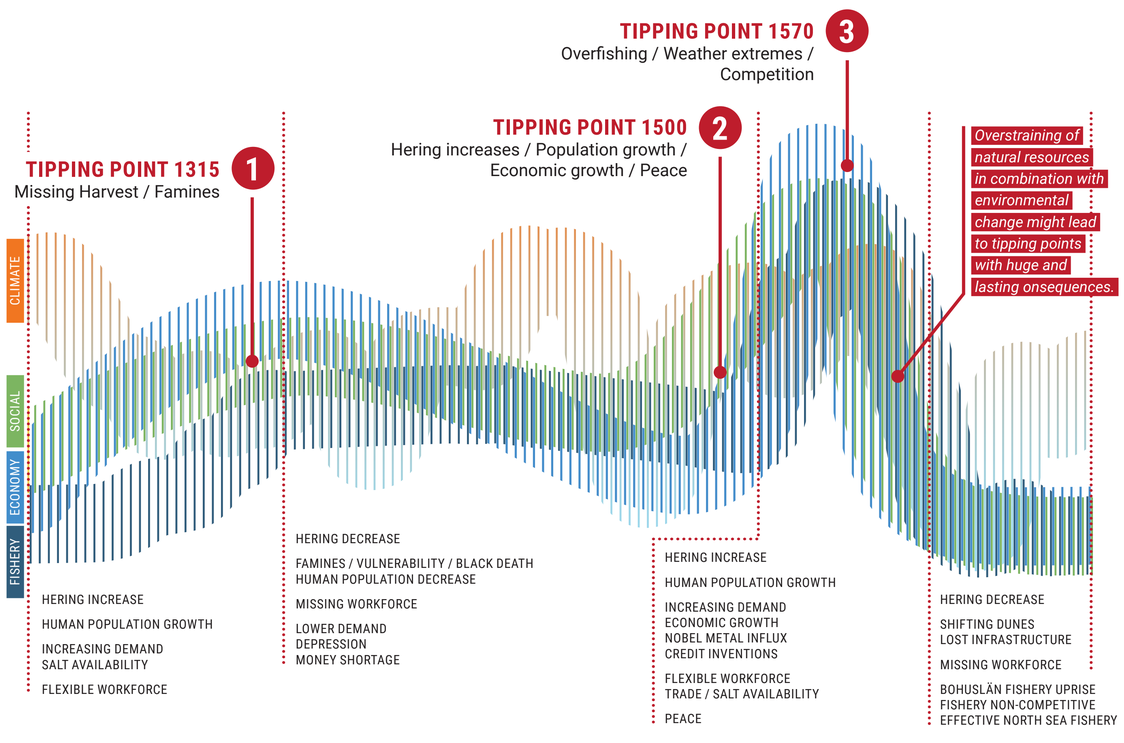
952 a.d.:
Meet the fearless viking jarl Snorri Sparrowson, who witnesses the process of salting herring for the first time.

1250 a.d.:
The farmer, and part-time fisher, Hans Sparow catches a lot of herring, and has a lot of fun at the Scanian fairs. And he's in love with sweet Geseke...

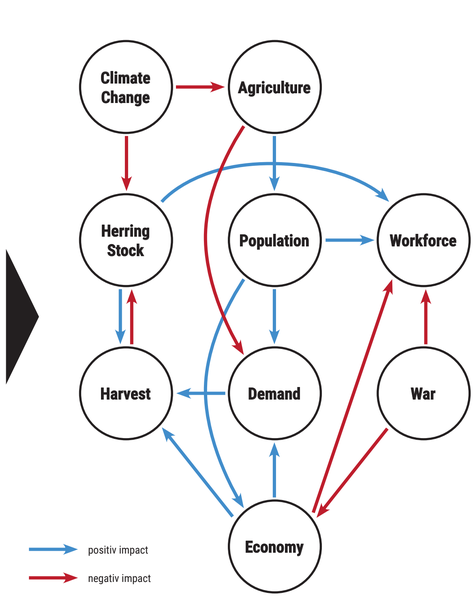
1500 a.d.:
Harald Sparö a Danish toll-keeper, loves the king. And he hates the Hanseatic merchat. Danish is the herring!

1580 a.d.:
Times are hard! Nothing to trade for the poor merchant Claus Sparius at Scania. Then fish is gone! Luckily, he now has contracts on cattle.

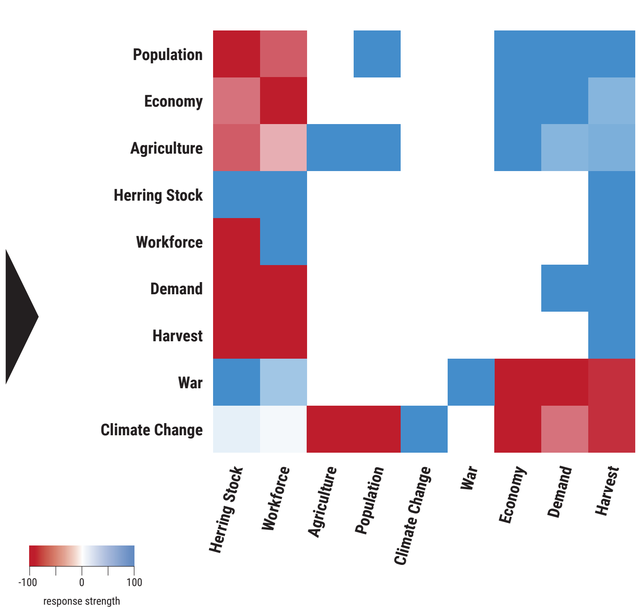
FROM THE HISTORICAL COURSE VIA THE CONCEPTUAL MODEL TO THE FIRST RESULTS



LOOP MODEL



HEAT MAP



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