DSF – Decision Support Framework

Astrid Sturm, BTU Cottbus-Senftenberg

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What is the purpose of the DSF?

The decision support framework is the gateway to all project results and tools

For all 16 case studies the DSF provides:

- Summery of the project results by categories:
  - Main results
  - Effects of climate change
  - Risk and opportunities
  - Adaptation strategies
  - Socio-economic outcomes
- Links to more detailed documents
- Links to tools if existing for the case study

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Bit.ly/climefishdsf

The DSF is an online tool, just follow the link:
http://136.144.228.39:8080/climefish/home
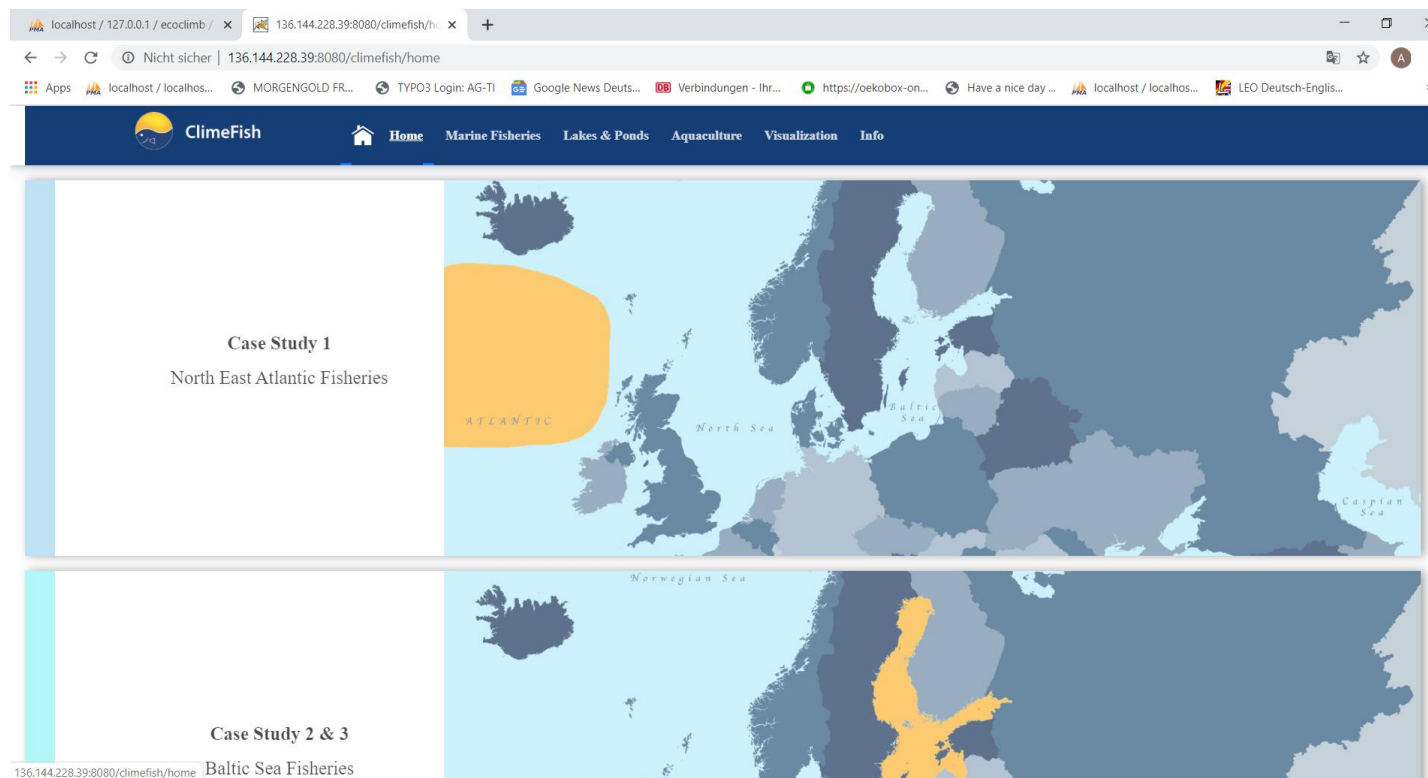
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Main window of the DSF

The results are listed per case study:

- The case studies are listed by case study number on the main page.
- If one of the sectors is selected in the main menu, only the sector related case studies are presented.
- The structure is the same for all case studies – the amount of results/information depends on the case study

Example for Greek marine aquaculture
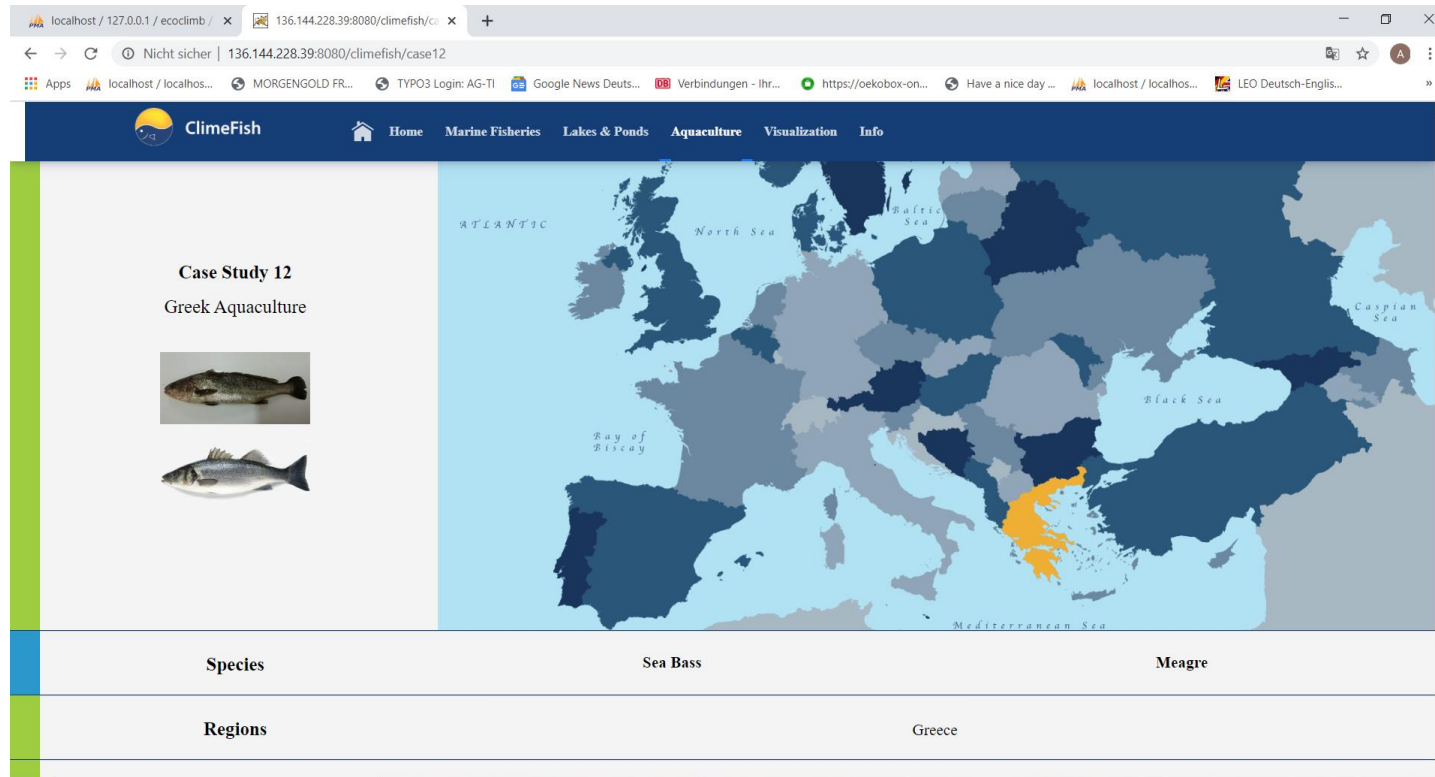
Example for Greek marine aquaculture

Main Results

- Fish will grow faster in the future, requiring shorter periods to reach different commercial sizes. Depending on the region, production time may be shortened for up to 3 months by 2050.
- Extreme events such as storms and heatwaves will negatively affect production by possible increase of mortality rates or disrupting feeding and increasing operational costs.

Risks & Opportunities

Show Further Results

The risk assessment identified several climate related drivers, that c
Greece. Higher temperatures have the potential to promote fish grow
as to allow farming of new warm-water species. However, issues su
presence of pathogens, lower water quality, augmented mortality rat
identified as possible risks stemming from climate change that can h

Risks & Opportunities

Show Further Results

The risk assessment identified several climate related drivers, that can affect negatively or positively the aquaculture industry in Greece. Higher temperatures have the potential to promote fish growth and increase the production capacity at a farm level as well as to allow farming of new warm-water species. However, issues such as growth irregularities, decreased fish health, increased presence of pathogens, lower water quality, augmented mortality rates, farm site suitability, and increased feed prices have all been identified as possible risks stemming from climate change that can have substantial consequences for the industry.

Adaptation Strategies

The adaptation strategy for Greece expands to three levels, by suggesting adaptive measures at the industry level, providing policy recommendations, and identifying research and knowledge gaps.

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Example for Greek marine aquaculture

Example for Greek marine aquaculture

Risks & Opportunities: C12A - Greece

Main Results

The risk and opportunities from climate change were assessed through a stakeholder-based approach where both positive and negative impacts were identified and scored in terms of their severity in collaboration between external stakeholders and ClimeFish scientists. ClimeFish scientists then conducted an empirical analysis to assign a likelihood for the identified impacts to occur. These two components formed the impact score, which could range from severe to negligent for risks and transformative to negligent for opportunities.

For a complete methodology and the Risk and Opportunity Assessment, please refer to Deliverable 4.3. (Link will follow soon)

The aquaculture industry in Greece does not show a high correlation of its production levels with the effects of climate change since overall production is mostly defined by socioeconomic rather than environmental criteria. However, there are several factors associated with climate change that have the potential to impact the industry thought their effects on the fish, the environment, the farm productivity, as well as the socioeconomic performance.

The increase in temperature is the main driver identified to promote climate events that can affect the productivity of the farms in both negative and

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Example for Greek marine aquaculture

Risks & Opportunities

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At research level actions includes knowledge building regarding the biological mechanisms implicated in response to high temperatures and other climate change drivers.

Policy recommendations focus on establishing a flexible legal framework for the operation of the farms and designation of new sites as well as investment on breeding programs and novel farming technologies.

At the industry level, several measures aim to increase collaboration between farms and prepare the industry for future changes at farm and wider organizational levels (zones of development).

Socio-Economic Outcomes

Show Further Results

The socioeconomic analysis predicts a decline in operating profits and gross value added for farms in the future. For moderate scenarios farms will remain profitable but may register losses of up to 25% by 2050. However, for more pessimistic scenarios losses will be in the order of several million euro making it unlikely for the industry to remain viable in the long run. The analysis makes no assumptions for adaptation of the current farming technology which may radically alter this trend and therefore should be interpreted with caution.

Download DSS

Download Software

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Visualization tool within the DSF

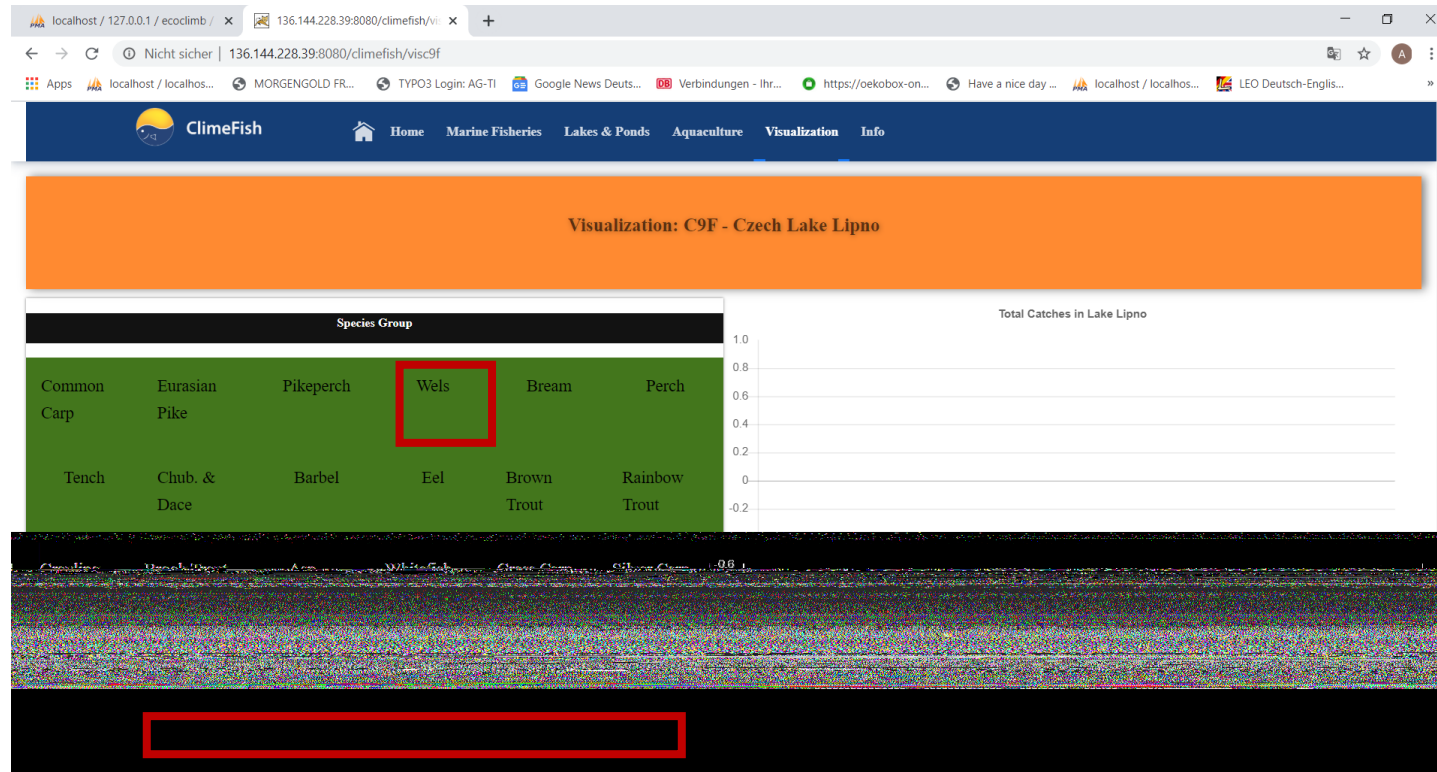## The DSF provides for 5 case studies an additional visualization tool

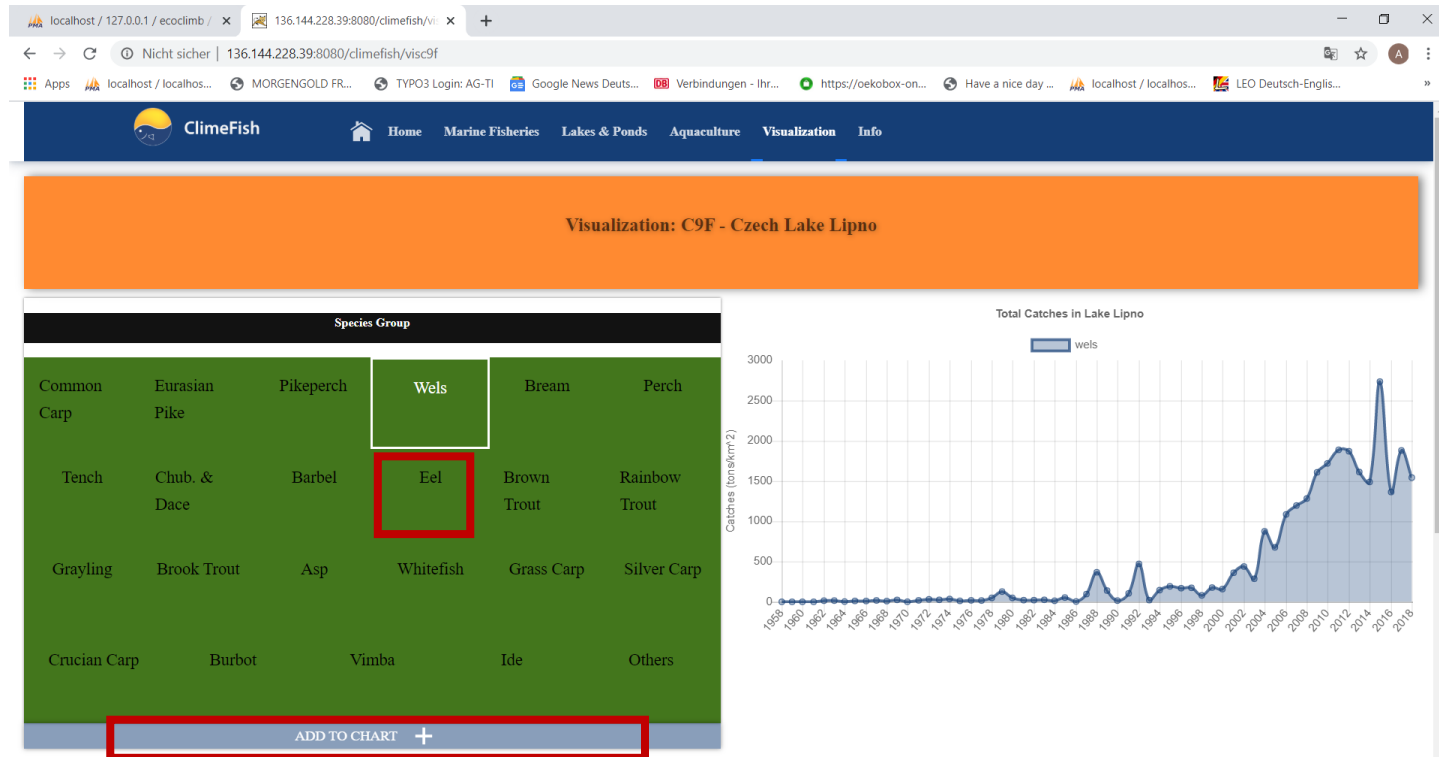- Select "visualization" in the main menu

- Select one of the case studies listed:
  - Baltic sea fisheries
  - The Adriatic sea
  - Italian lake Garda
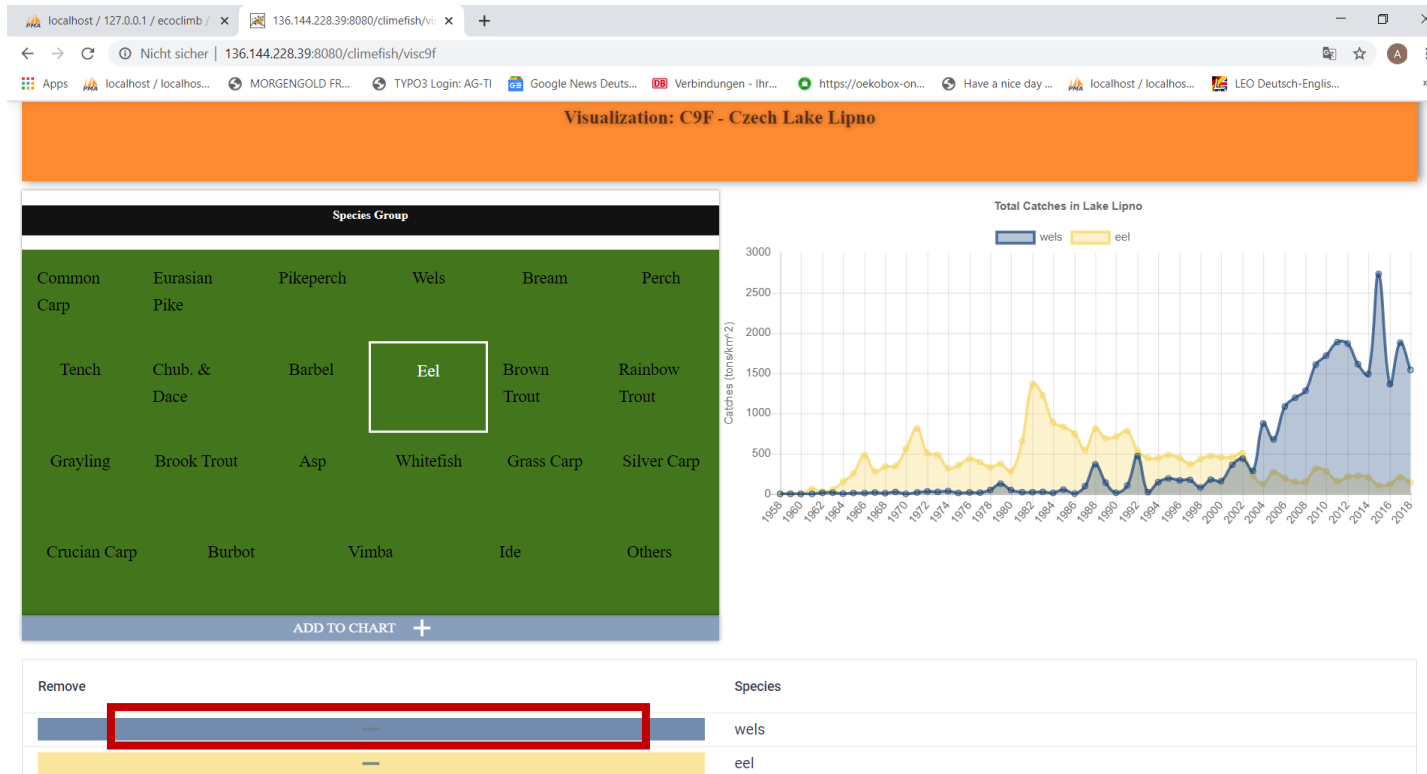 - Czech lake Lipno
  - European waters overall

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Visualization example Lake Lipno

Visualization example Lake Lipno

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Visualization example Lake Lipno

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