DSS – Decision Support Software

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ClimeFish

This project has received funding from the European Union´s Horizon 2020 research and innovation action under grant agreement no. 677039

DSS – Decision Support Software

Within the ClimeFish project 3 case specific decision support software were developed

1. Hungarian lake and pond aquaculture
2. Greek marine aquaculture
3. Scottish marine fisheries

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What is the purpose of the DSS?

The goal of a DSS is to assist in the decision making process

For all three developed DSS (Greek marine aquaculture, Hungarian pond aquaculture, Scottish marine fisheries) we simulate and visualize:

- biological implications of different climate change scenarios and management options
- resulting socio-economic developments
- risk assesment

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What is the purpose of the DSS?

The DSS is not a daily farm/fisheries management tool

For all three developed DSS the results are based on biological models, climate scenarios and user input:

- The DSS visualizes different “what if” scenarios based on user input and models
- Socio-economic calculations depend on user input and can be “misused” on purpose

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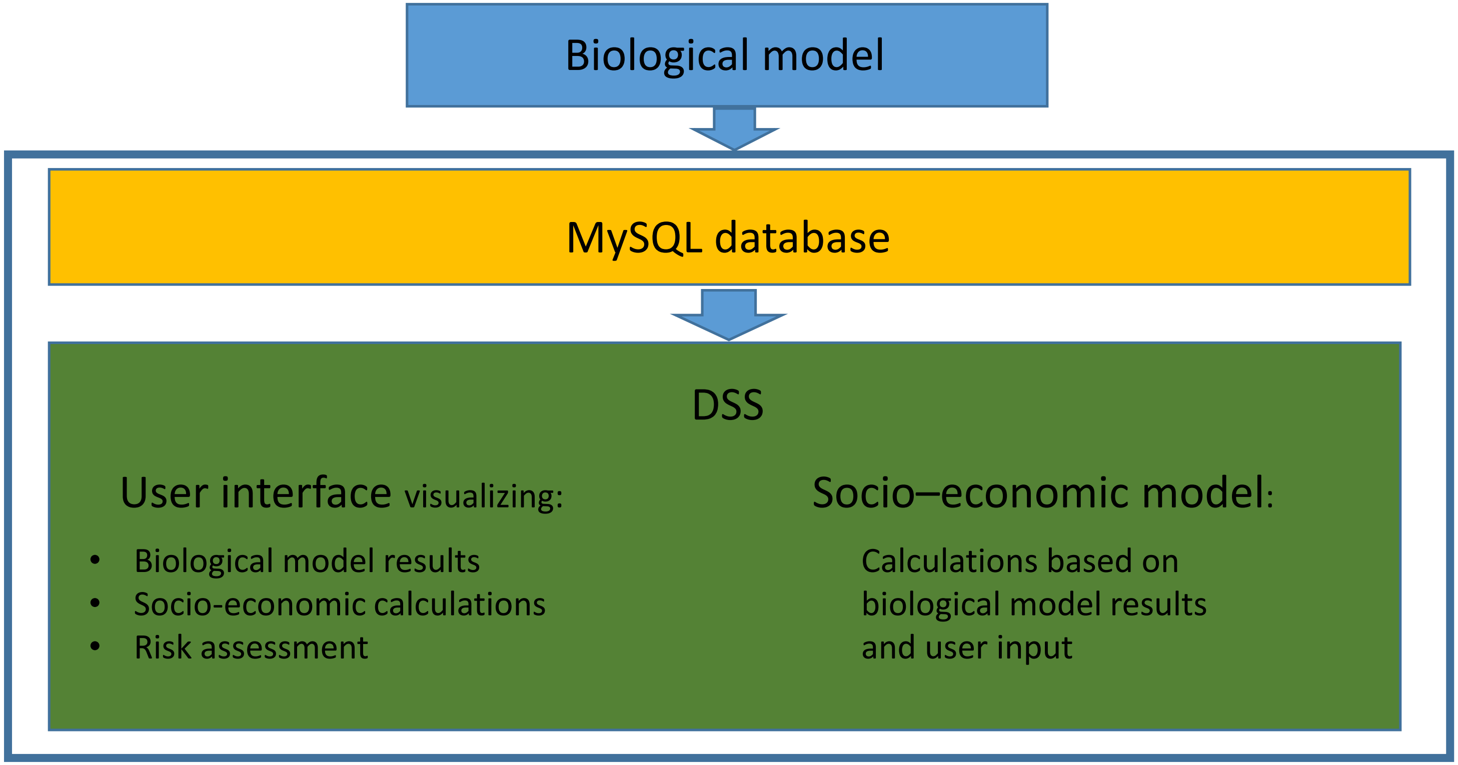
Basic structure of the 3 DSS



Biological model

MySQL database

DSS

User interface visualizing:

- Biological model results
- Socio-economic calculations
- Risk assessment

Socio–economic model:

Calculations based on
biological model results
and user input

Database and DSS needs to be installed on computer to use DSS

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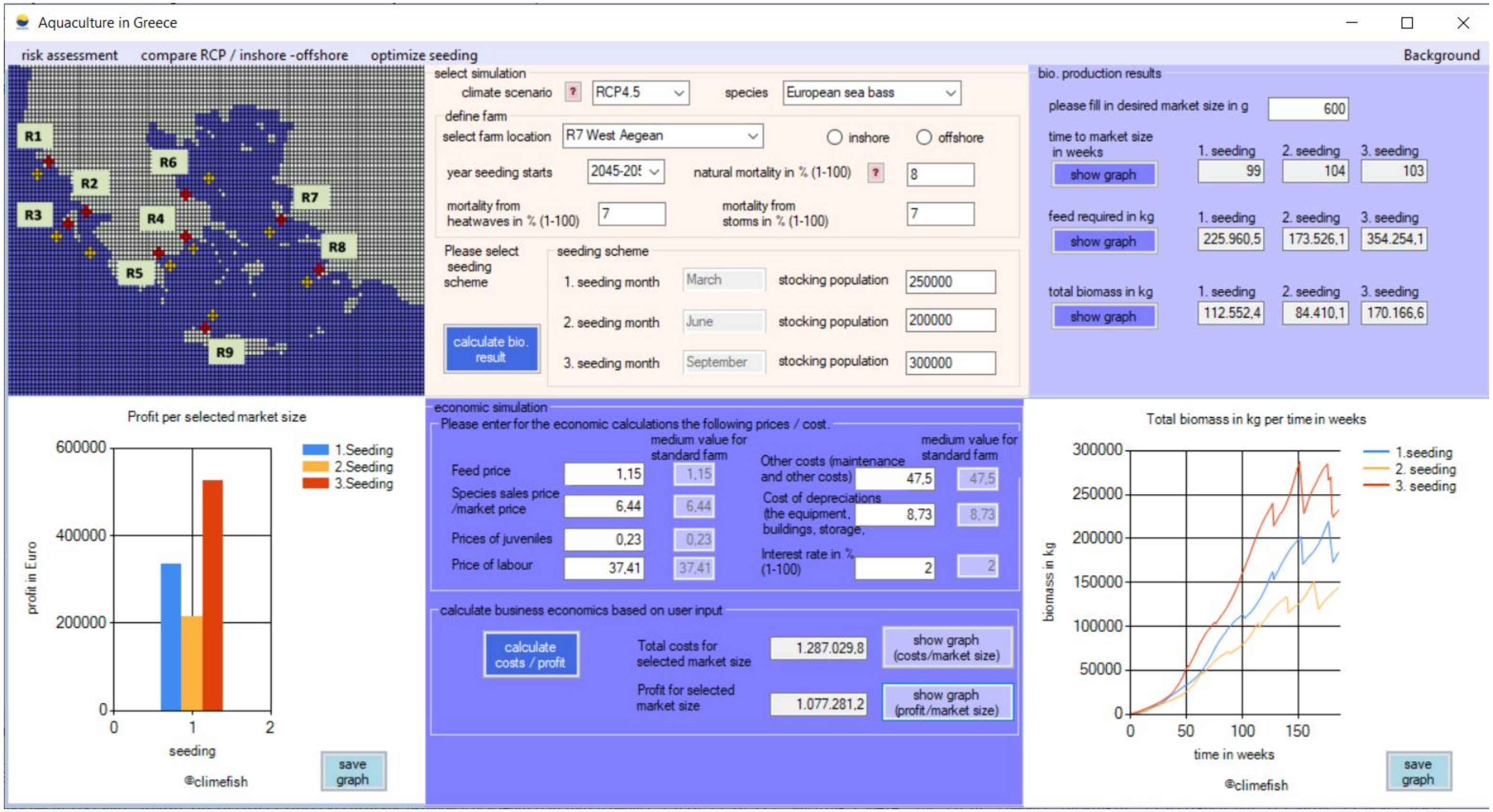
Example from the interface for Greek marine aquaculture


Aquaculture in Greece
risk assessment
compare RCP / inshore -offshore
optimize seeding
Background
R1
R2
R3
R4
R5
R6
R7
R8
R9
calculate bio. result
show graph
show graph
show graph
calculate costs / profit
show graph (costs/market size)
show graph (profit/market size)
Profit per selected market size
600000
400000
200000
0
profit in Euro
0
1
2
seeding
1.Seeding
2.Seeding
3.Seeding
©climefish
save graph
Total biomass in kg per time in weeks
300000
250000
200000
150000
100000
50000
0
biomass in kg
0
50
100
150
time in weeks
1.seeding
2. seeding
3. seeding
©climefish
save graph

select simulation

climate scenario: RCP4.5

species: European sea bass

define farm

select farm location: R7 West Aegean

○ inshore ○ offshore

year seeding starts: 2045-205

natural mortality in % (1-100): 8

mortality from heatwaves in % (1-100): 7

mortality from storms in % (1-100): 7

Please select seeding scheme

seeding scheme

1. seeding month	March	stocking population	250000
2. seeding month	June	stocking population	200000
3. seeding month	September	stocking population	300000

bio. production results

please fill in desired market size in g: 600

	1. seeding	2. seeding	3. seeding
time to market size in weeks	99	104	103
feed required in kg	225.960,5	173.526,1	354.254,1
total biomass in kg	112.552,4	84.410,1	170.166,6

economic simulation

Please enter for the economic calculations the following prices / cost.

		medium value for standard farm			medium value for standard farm
Feed price	1,15	1,15	Other costs (maintenance and other costs)	47,5	47,5
Species sales price /market price	6,44	6,44	Cost of depreciations (the equipment, buildings, storage,	8,73	8,73
Prices of juveniles	0,23	0,23			
Price of labour	37,41	37,41	Interest rate in % (1-100)	2	2

calculate business economics based on user input

Total costs for selected market size: 1.287.029,8

Profit for selected market size: 1.077.281,2

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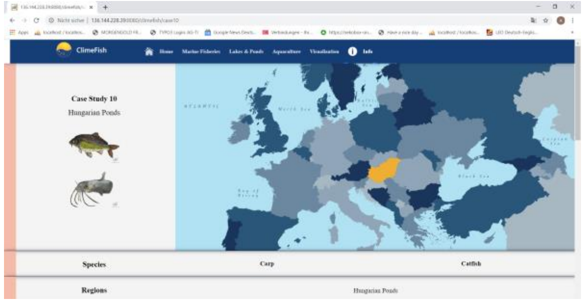
How to download and install the DSS (same procedure for all 3 DSS)

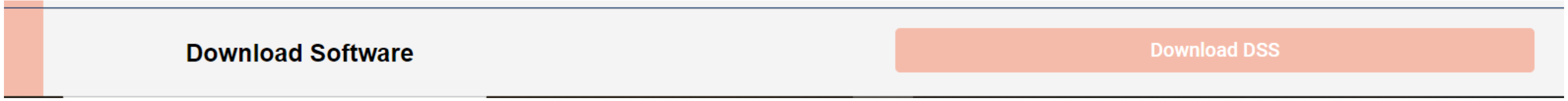
1. Go to : http://136.144.228.39:8080/climefish
2. Select case study:
   (Hungarian as example)


Nicht sicher | 136.144.228.39:8080/climefish/case10
ClimeFish
Home
Marine Fisheries
Lakes & Ponds
Aquaculture
Visualization
Info

Case Study 10
Hungarian Ponds

Species	Carp	Catfish
Regions	Hungarian Ponds	

3. Scroll down to “Download Software” and klick on link


Download DSS

Download Software

4. Follow download instruction:

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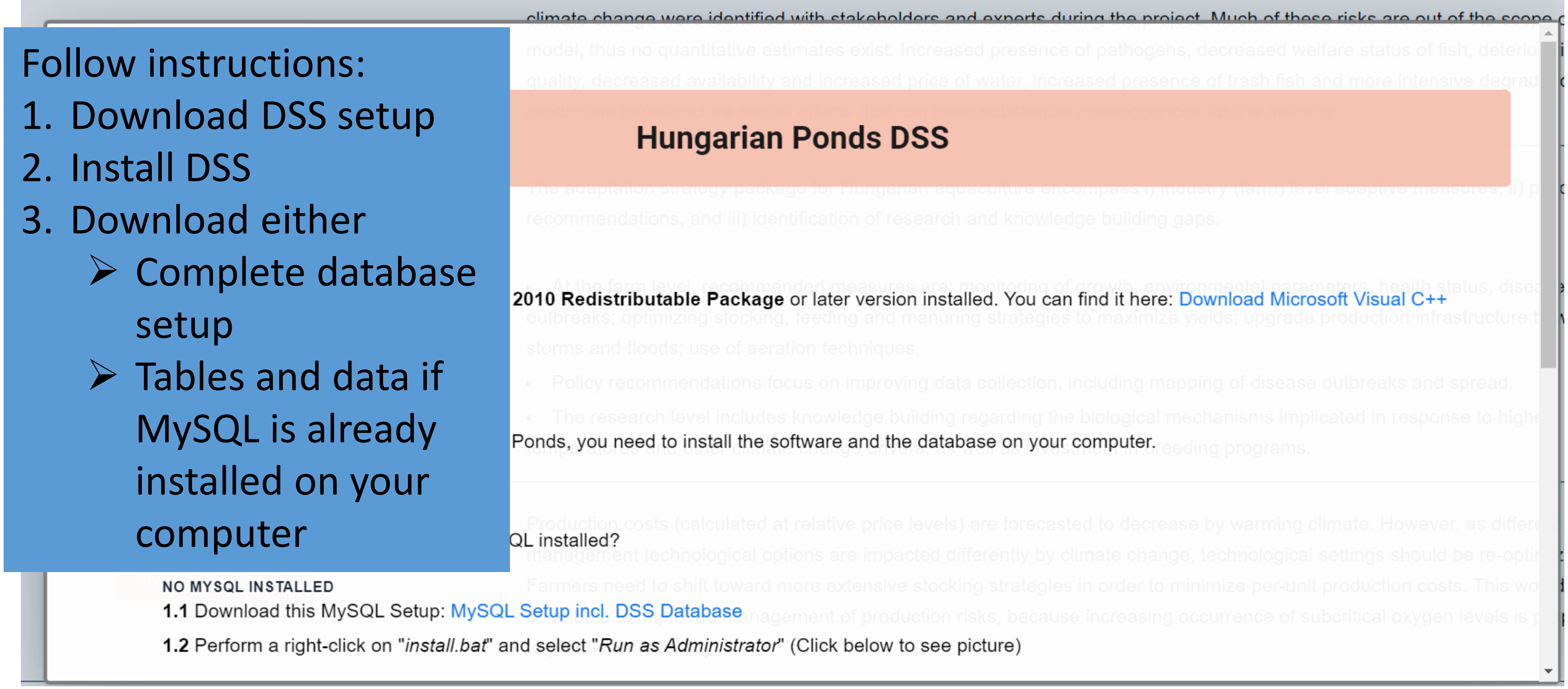
How to download and install the DSS (same procedure for all 3 DSS)

Follow instructions:

1. Download DSS setup
2. Install DSS
3. Download either
   - Complete database setup
   - Tables and data if MySQL is already installed on your computer



Hungarian Ponds DSS

2010 Redistributable Package or later version installed. You can find it here: Download Microsoft Visual C++

Ponds, you need to install the software and the database on your computer.

QL installed?

NO MYSQL INSTALLED

1.1 Download this MySQL Setup: MySQL Setup incl. DSS Database

1.2 Perform a right-click on "*install.bat*" and select "*Run as Administrator*" (Click below to see picture)

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