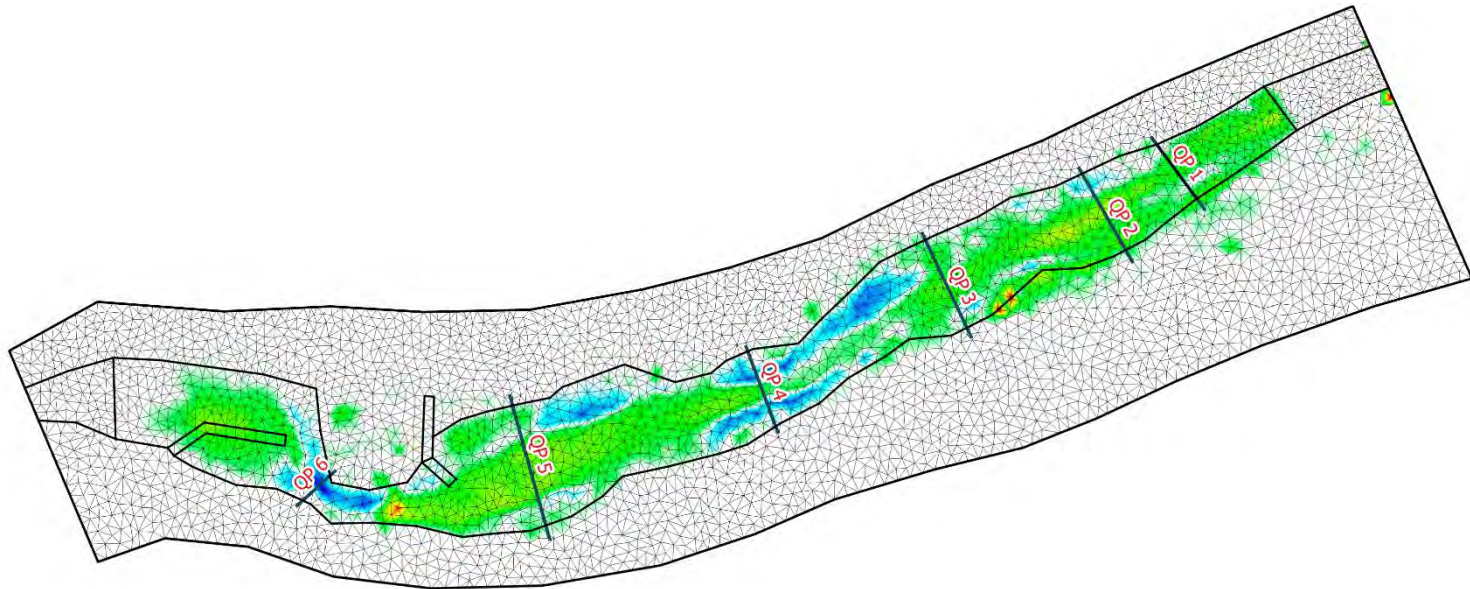


# 2D Postprocessing mit QGIS Crayfish


## Visualisierung am Beispiel Zulgboden



**Stephan Kammerer** ([kammerer@vaw.baug.ethz.ch](mailto:kammerer@vaw.baug.ethz.ch))

**Rapperswil, 25. Januar 2016**

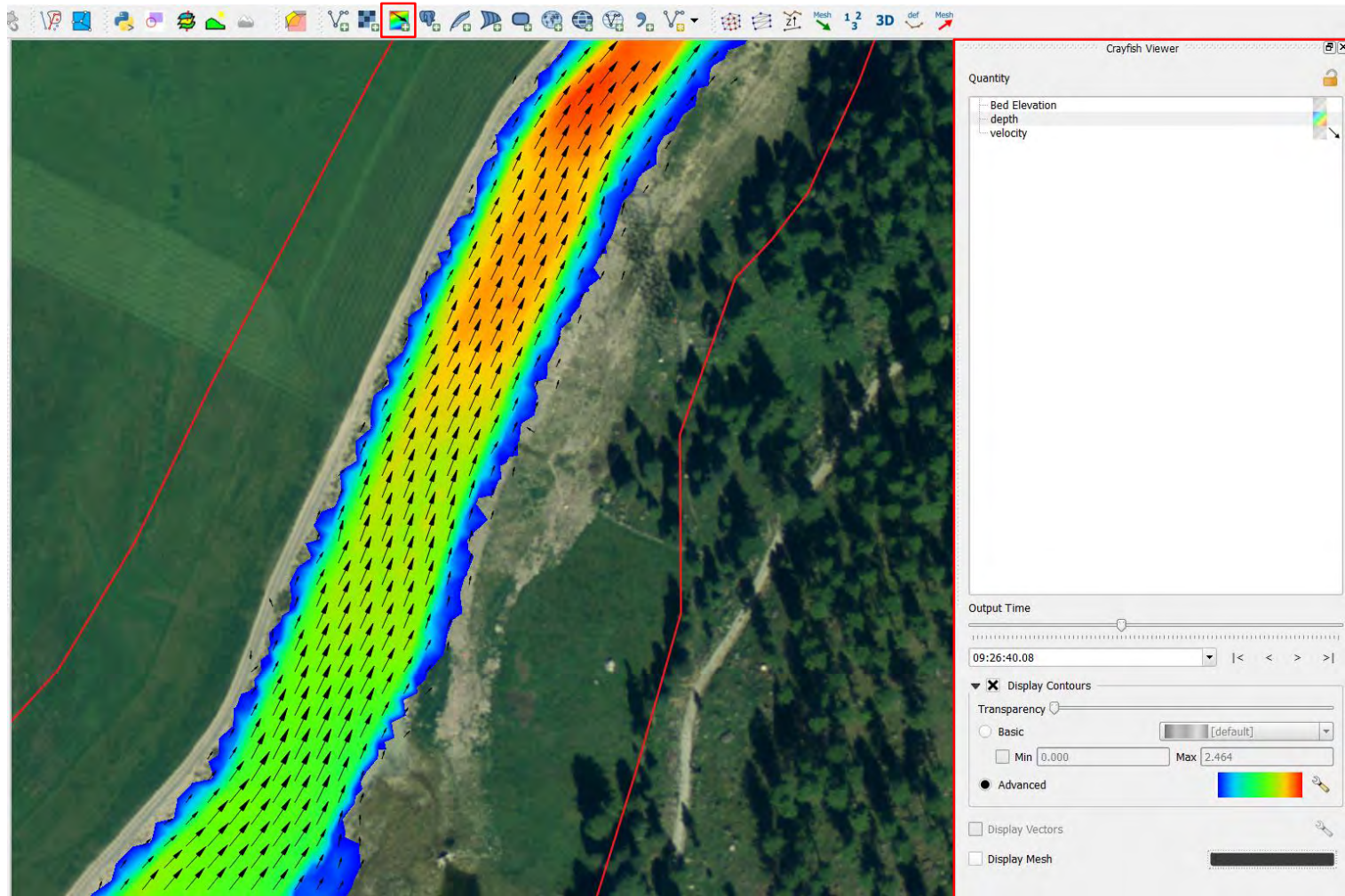
# Inhalt

- Einführung QGIS Crayfish 
- Neue Funktionalität
  - Datenformate
  - Plot – Funktion
  - Python API

# Einführung Crayfish Plug-In

- Plug-In für open source software QGIS
- Entwickelt durch Lutra Consulting (GB)
- Aktuelle Version: **Crayfish 2.3.2**
- Weiterentwicklung in Zusammenarbeit mit der VAW

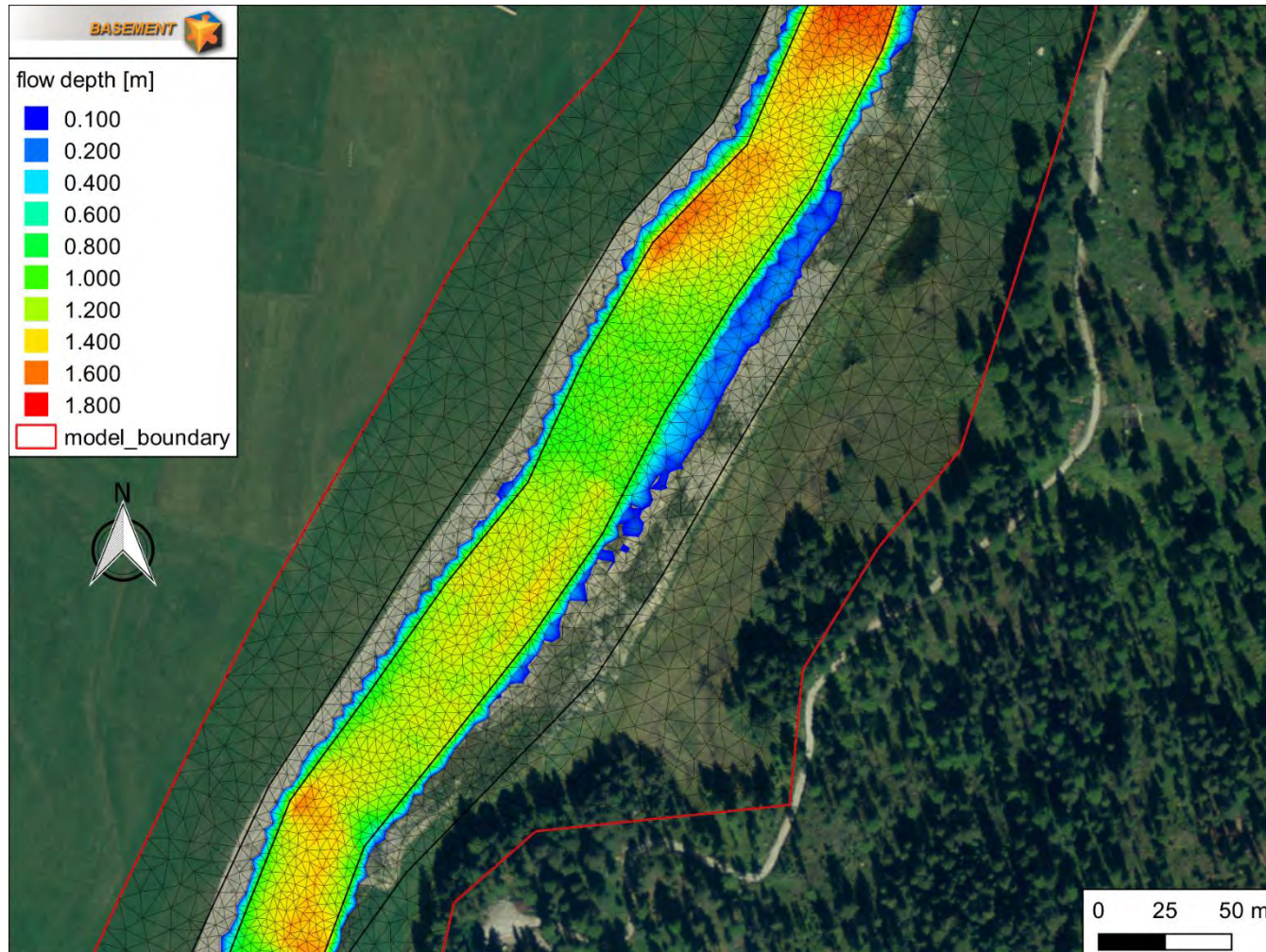
# Einführung Crayfish Viewer panel



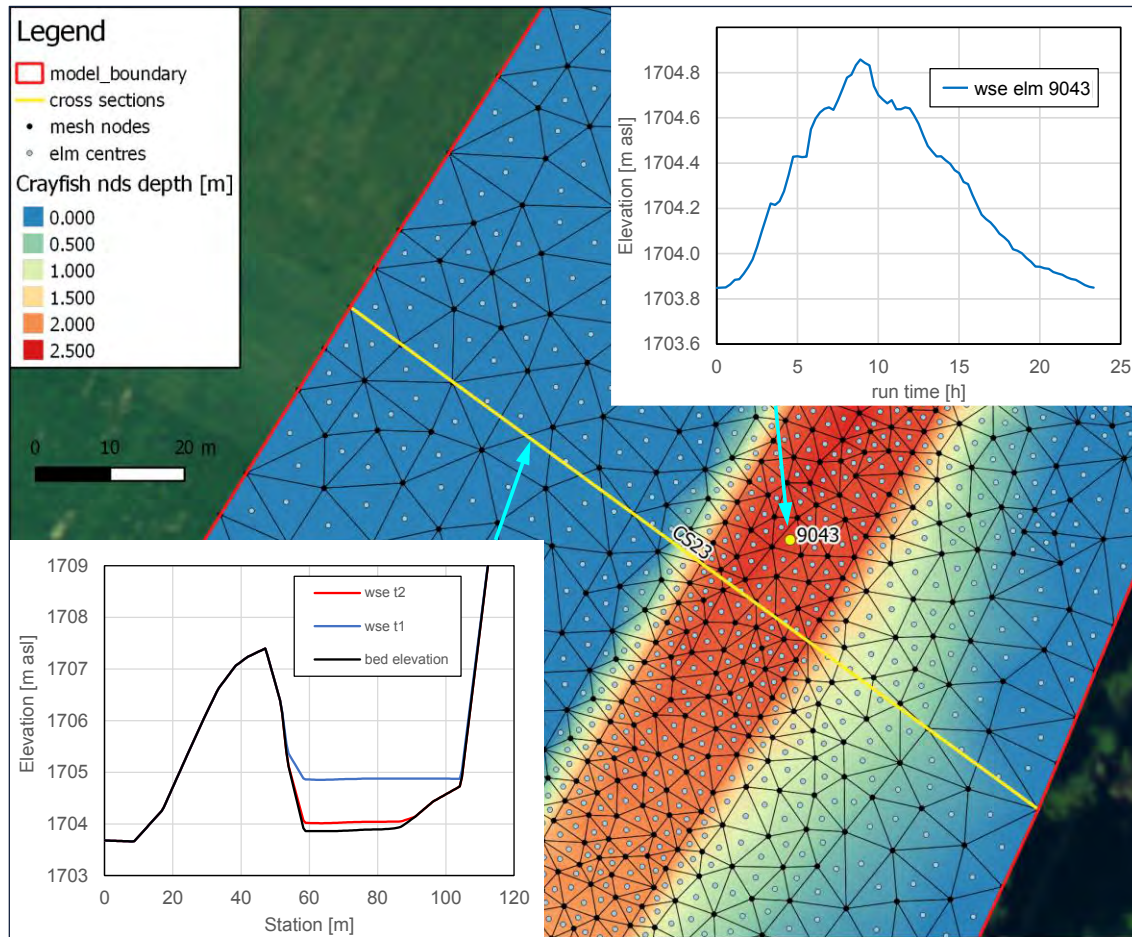


# Einführung

## Karten exportieren



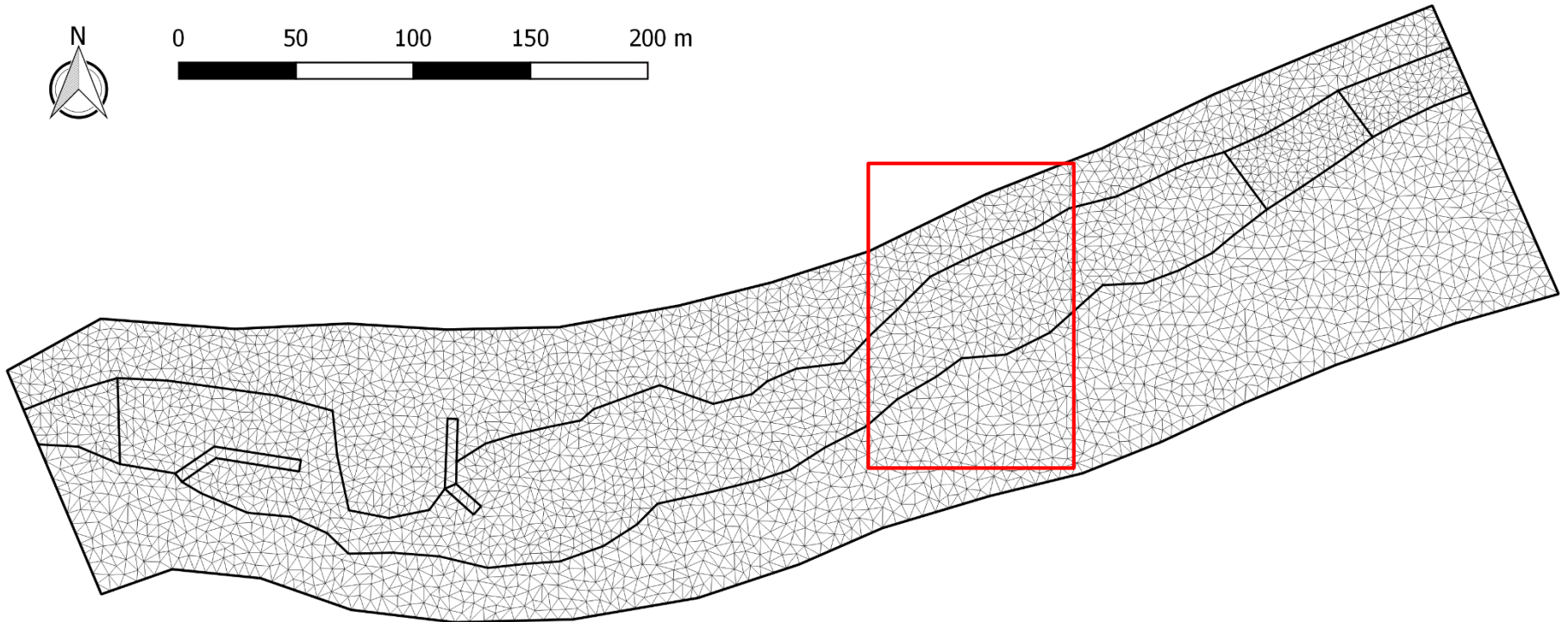
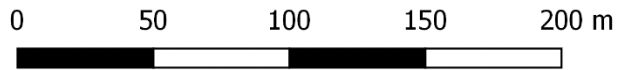
# Einführung Ausblick 2016





# Neue Funktionen

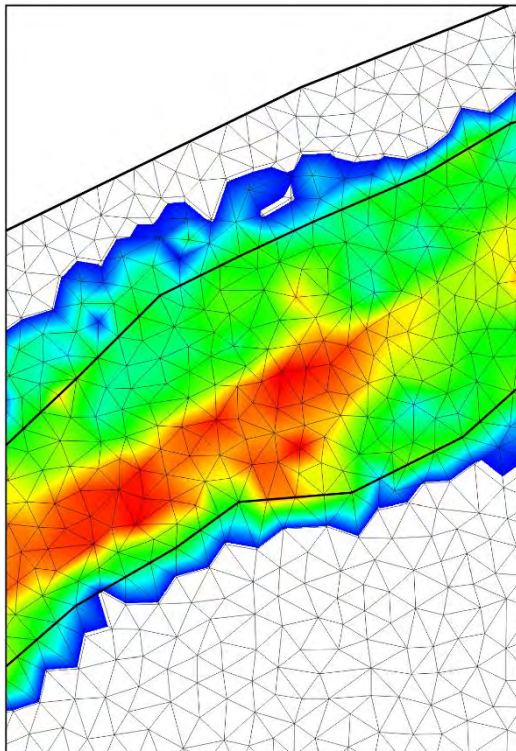
## Beispiel Zulgboden



# Neue Funktionen

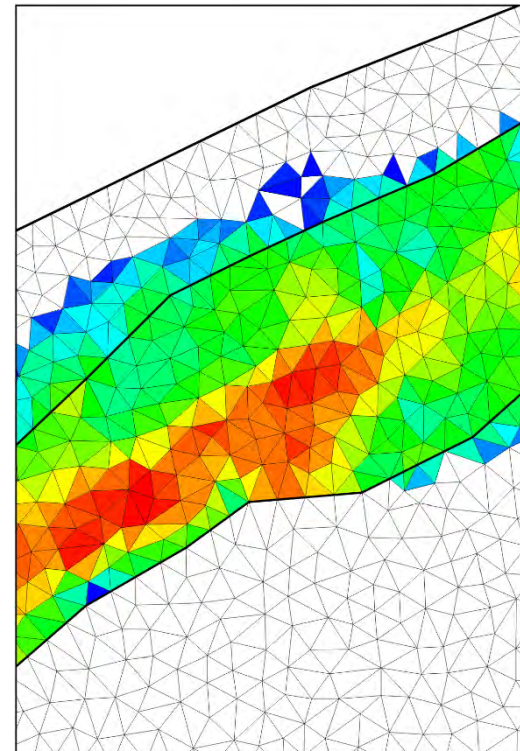
## Datenformate (\*.sol files)

**type: node\_centered**

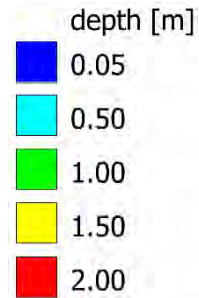


z.B. *deltaz*, *grain\_size*...

**type: element\_centered**

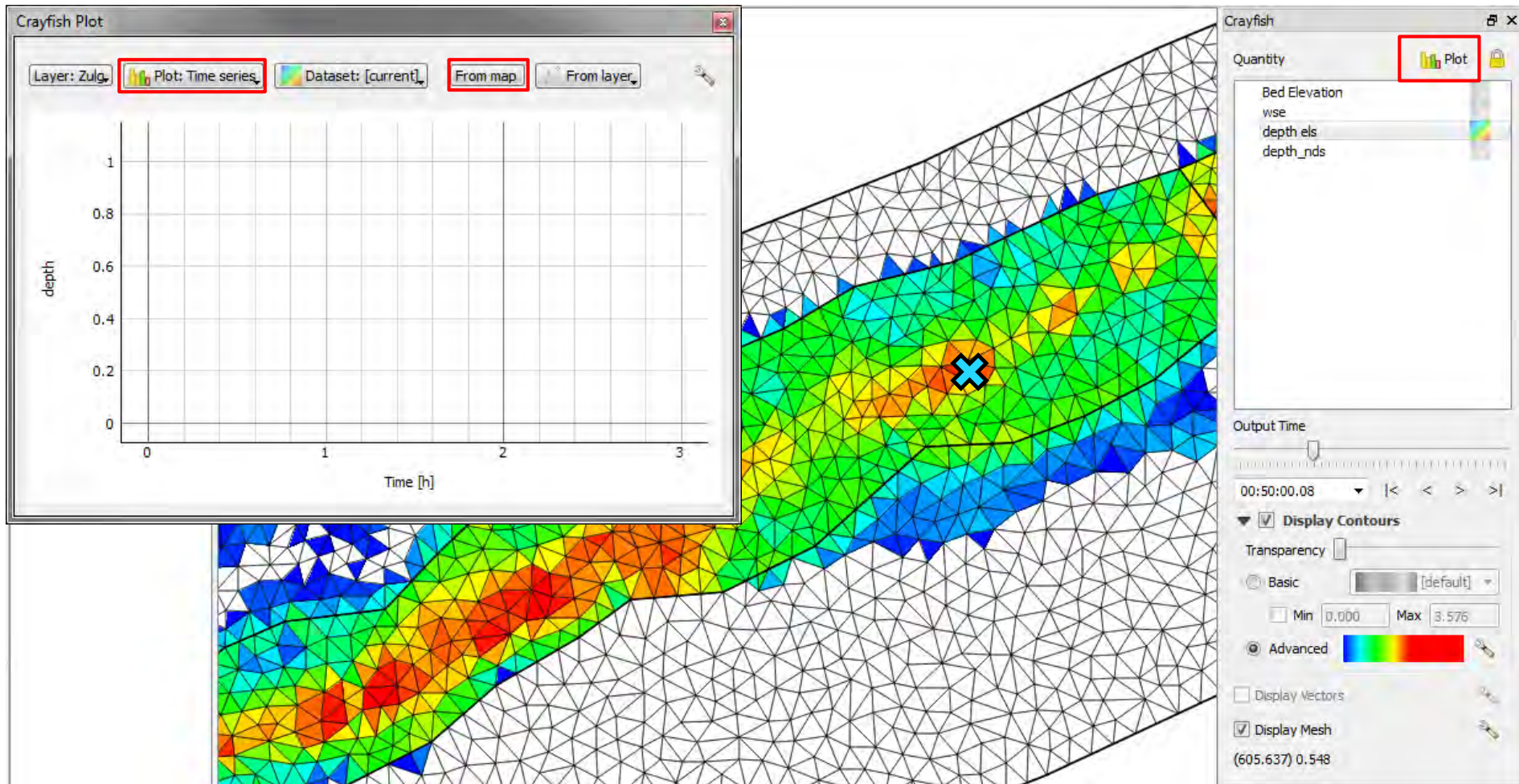


z.B. *depth*, *wse*, *velocity*...



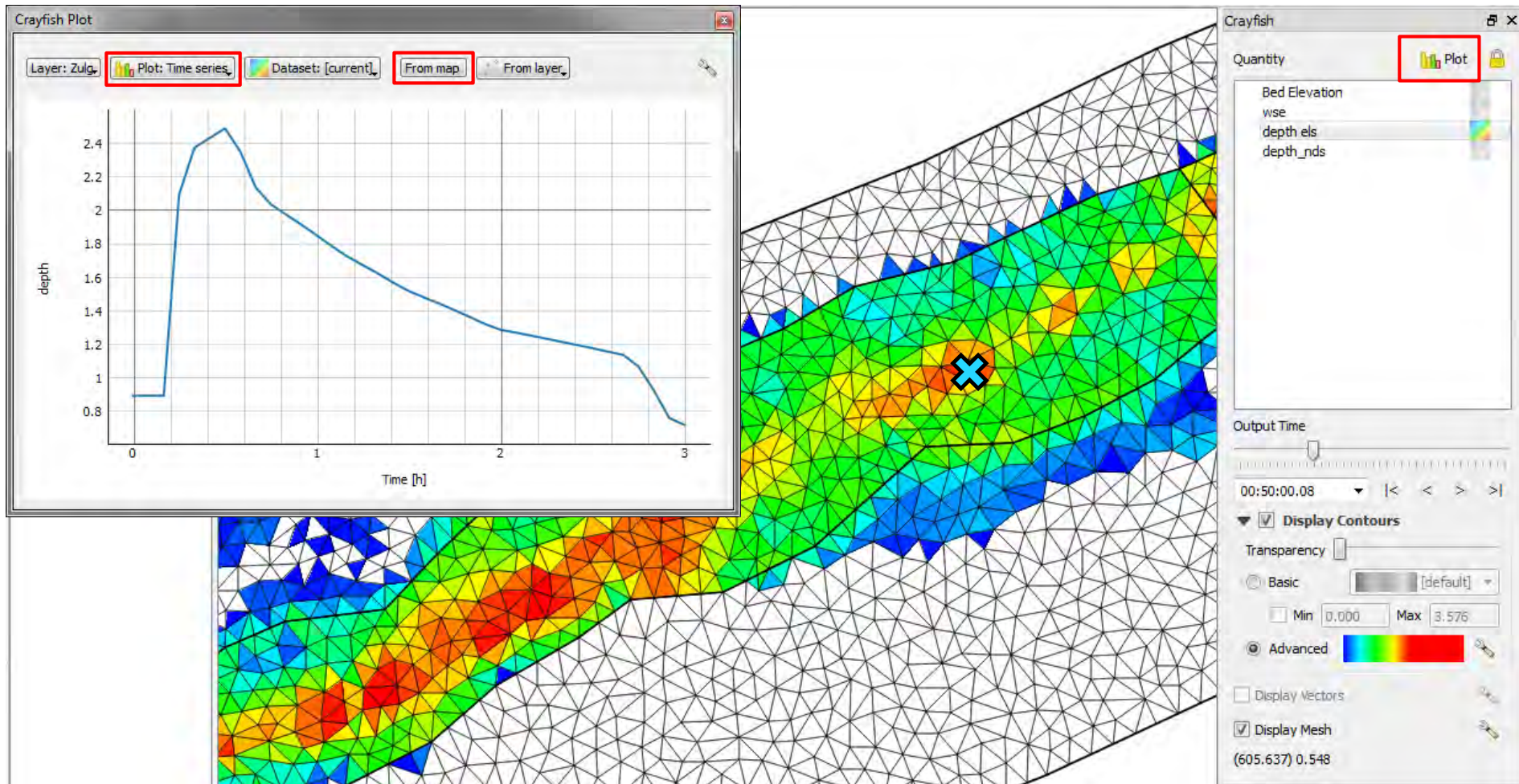


## Crayfish Plot panel



# Neue Funktionen

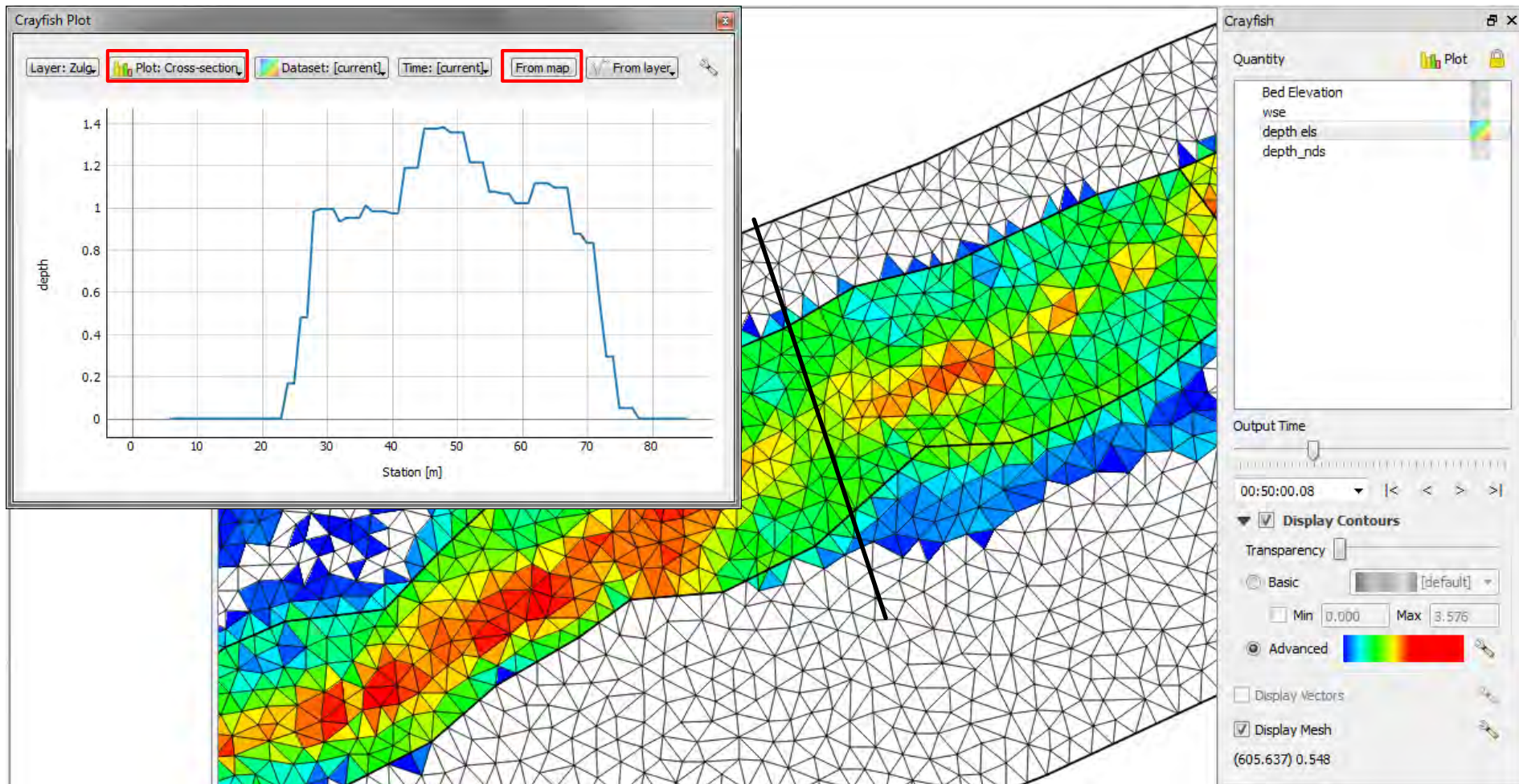
## Crayfish Plot panel





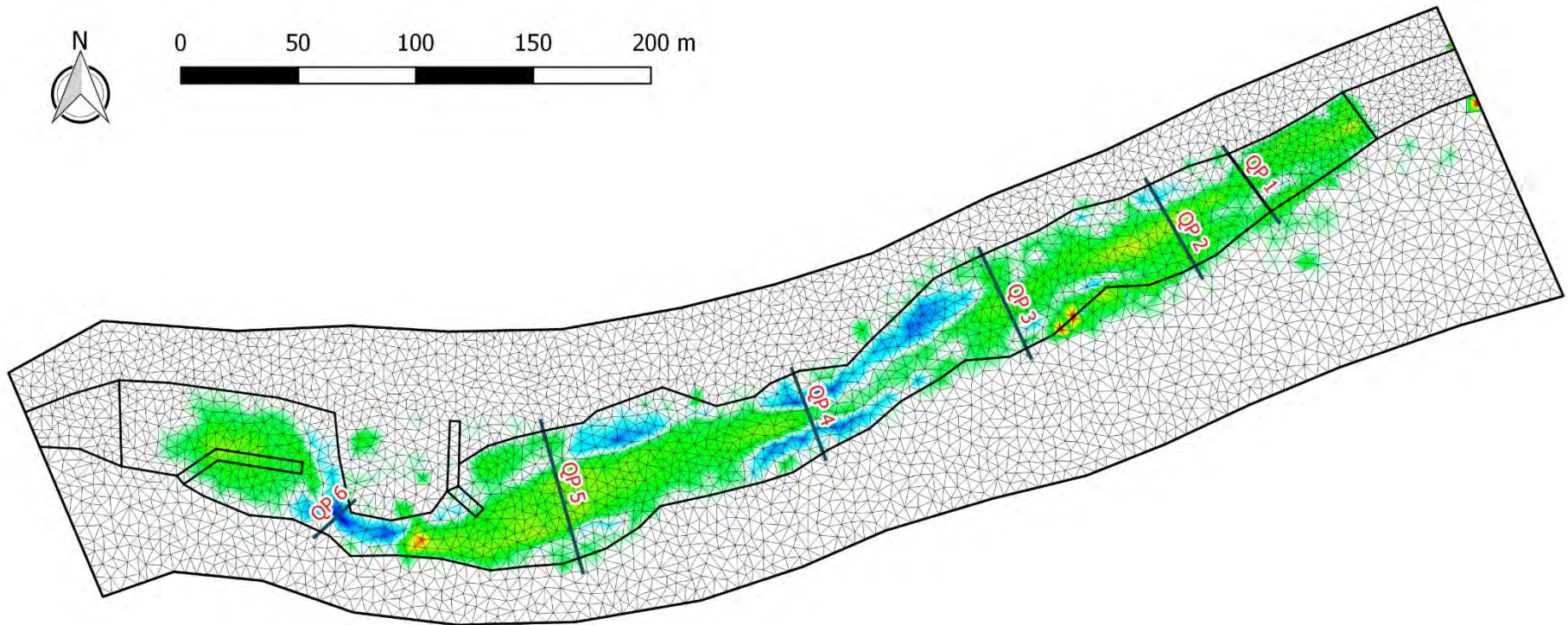
# Neue Funktionen

## Crayfish Plot panel





Plot: Cross – section



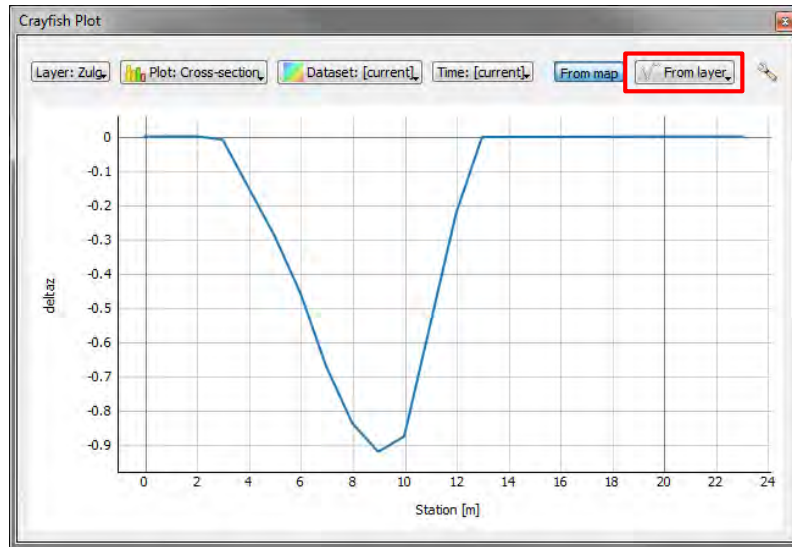
Legende

Sohlenveränderung [m] ■ -1.00 ■ -0.75 ■ -0.50 ■ -0.25 ■ 0.25 ■ 0.50 ■ 0.75 ■ 1.00 ■ 1.25 ■ 1.50 ■ 1.75 ■ 2.00

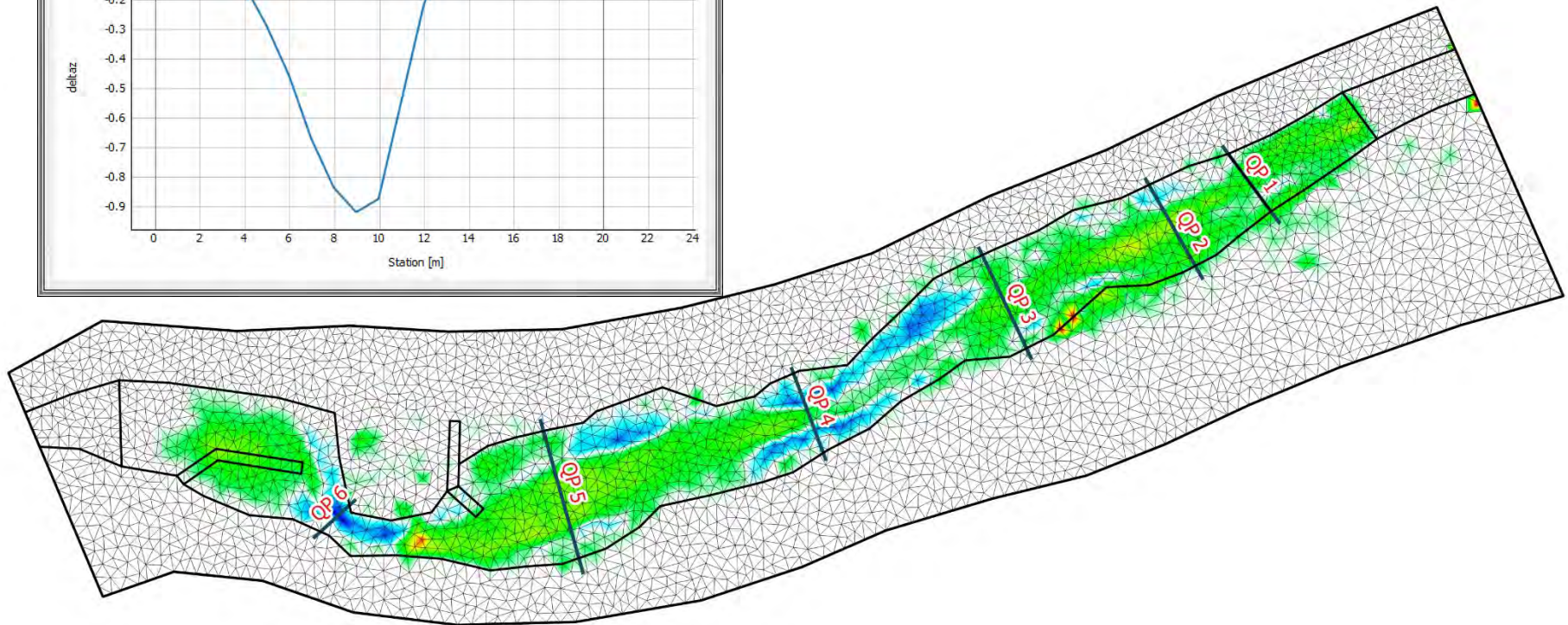


## Neue Funktionen

# Plot: Cross – section (Line vector layer)



deltaz **QP 6** «from layer»

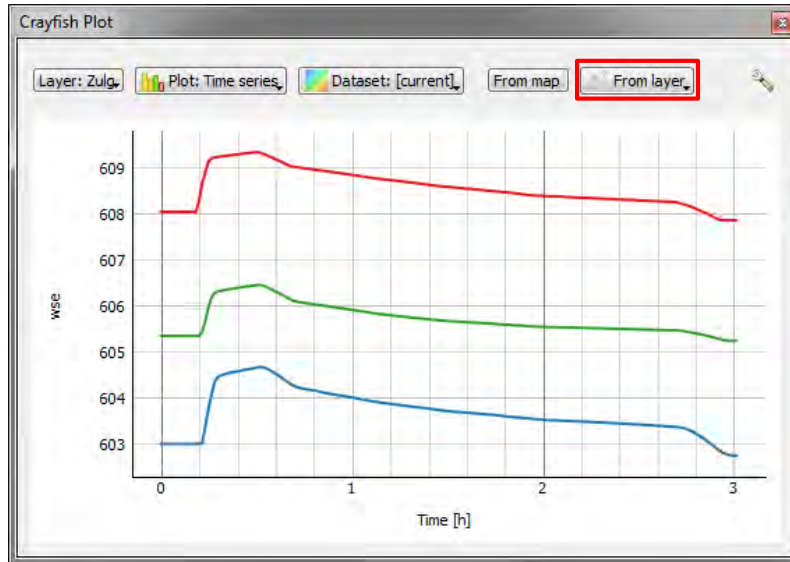


## Legende

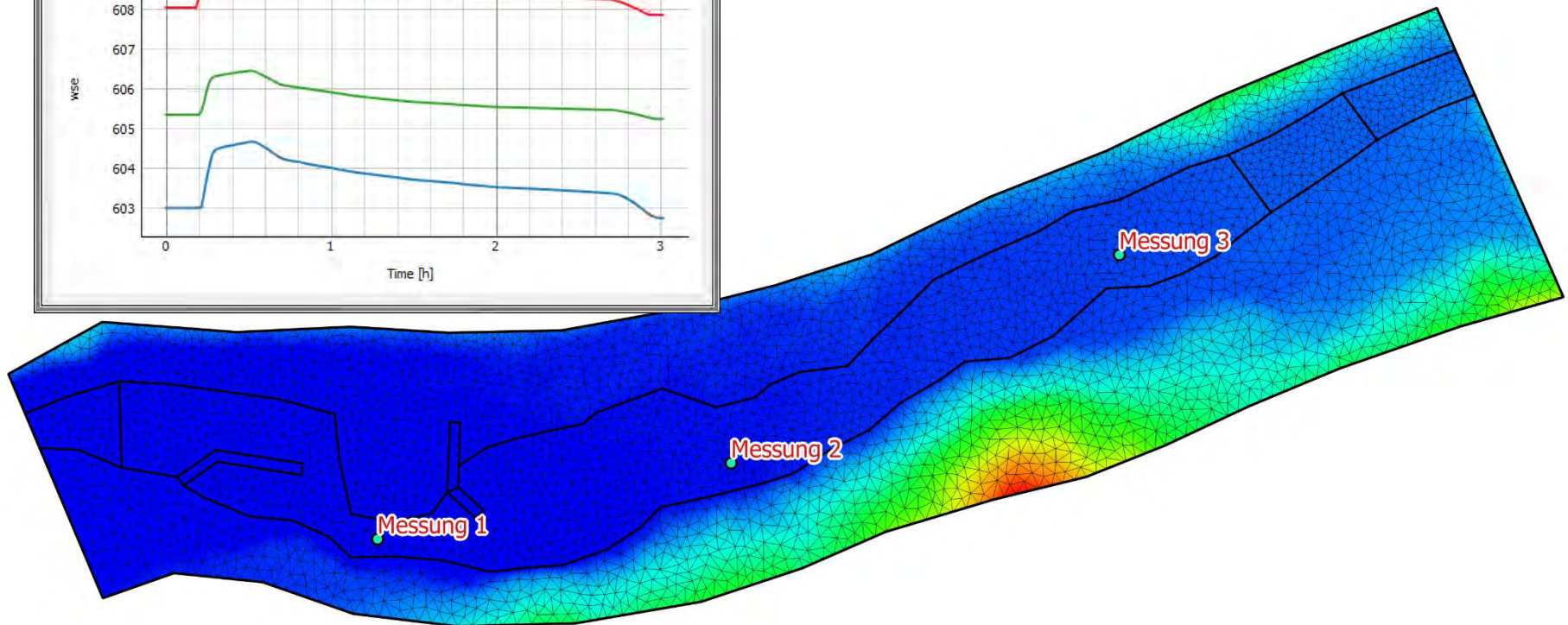
Sohlenveränderung [m] ■ -1.00 ■ -0.75 ■ -0.50 ■ -0.25 ■ 0.25 ■ 0.50 ■ 0.75 ■ 1.00 ■ 1.25 ■ 1.50 ■ 1.75 ■ 2.00



## Neue Funktionen

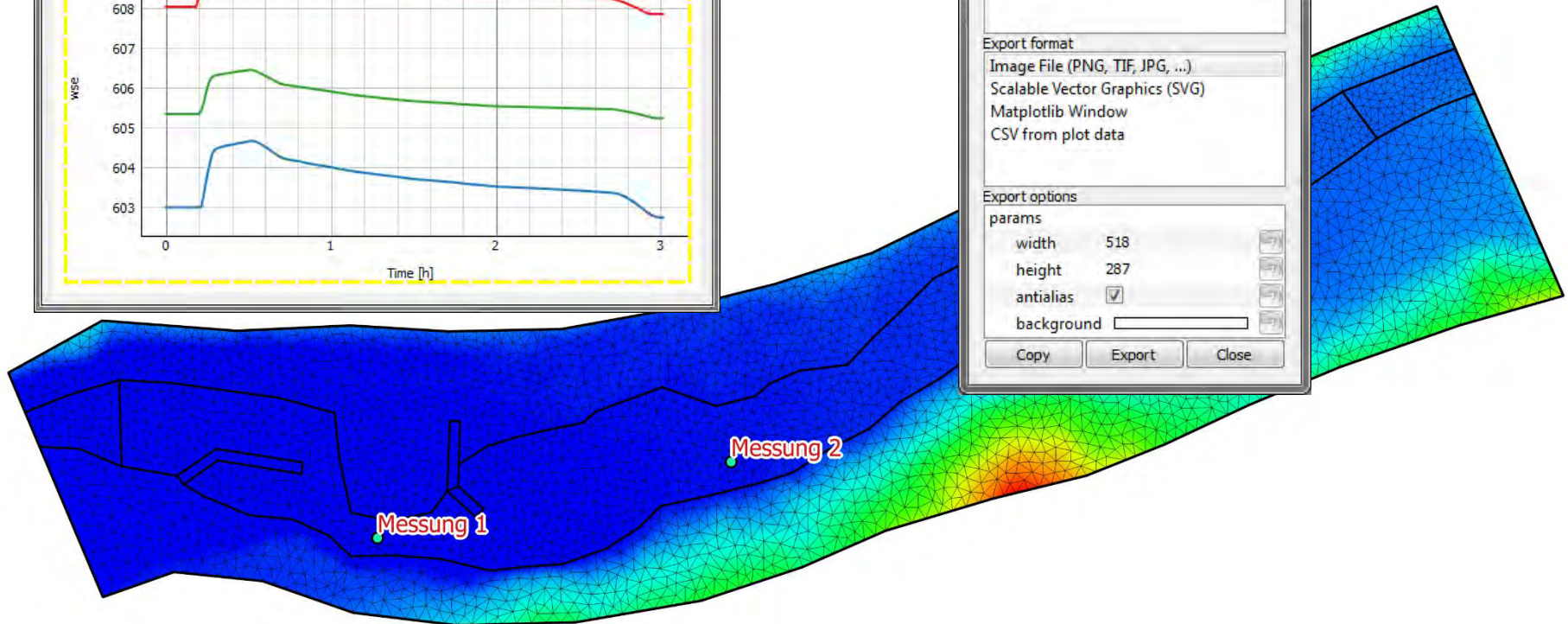
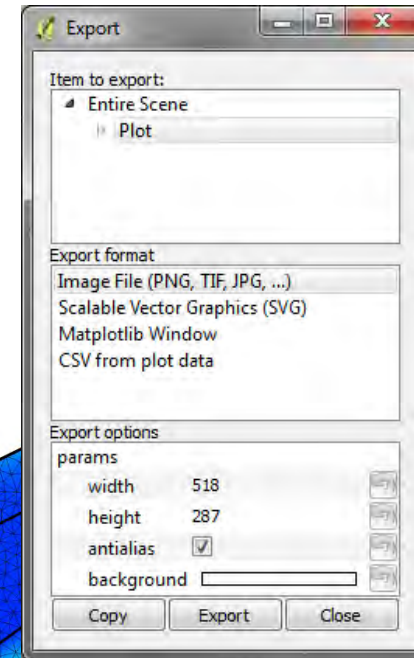
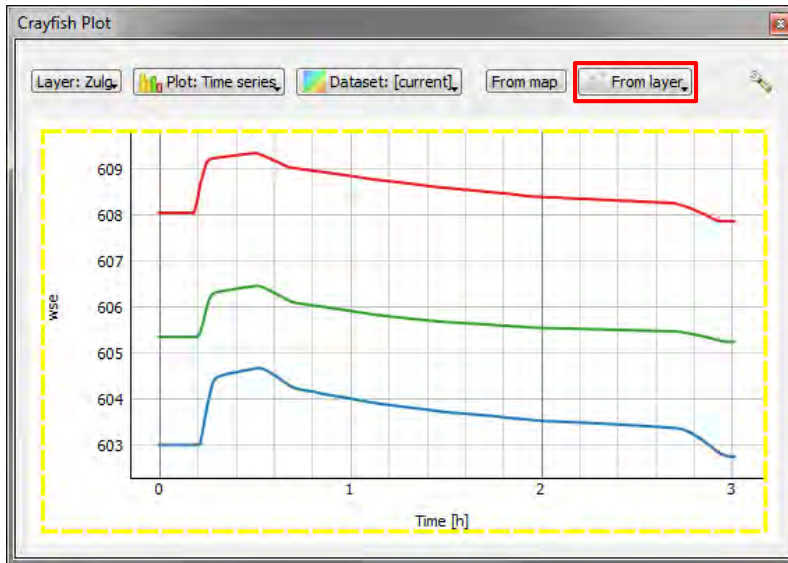
**Plot: Time series (Point vector layer)**

wse **Messung 1, 2, 3** «from layer»





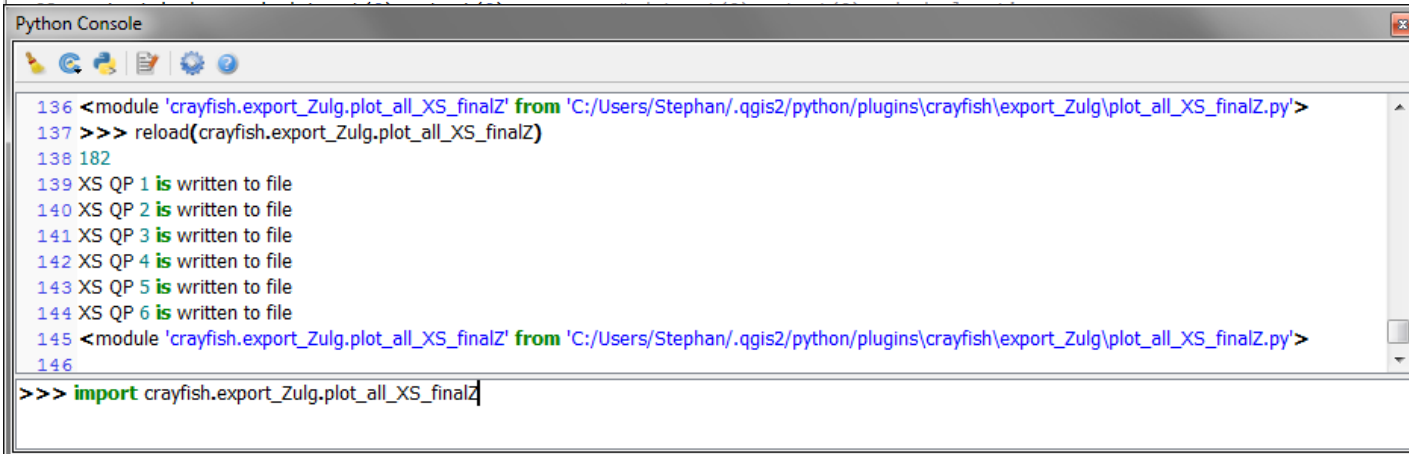
# Plot: export data



## Neue Funktionen

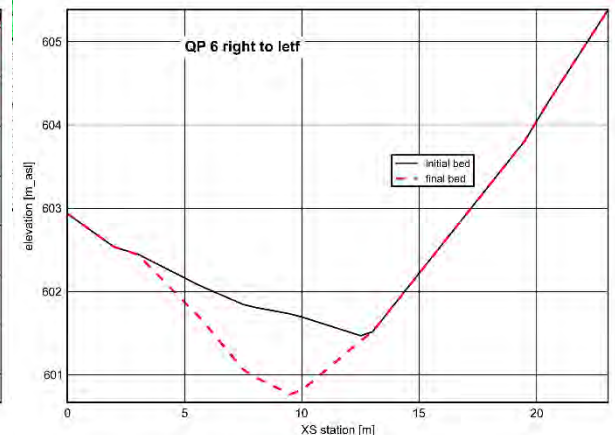
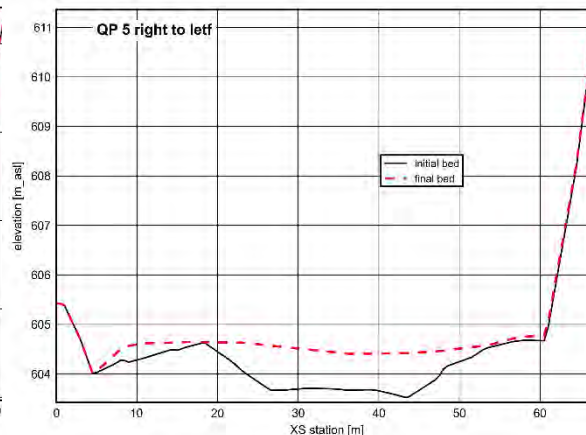
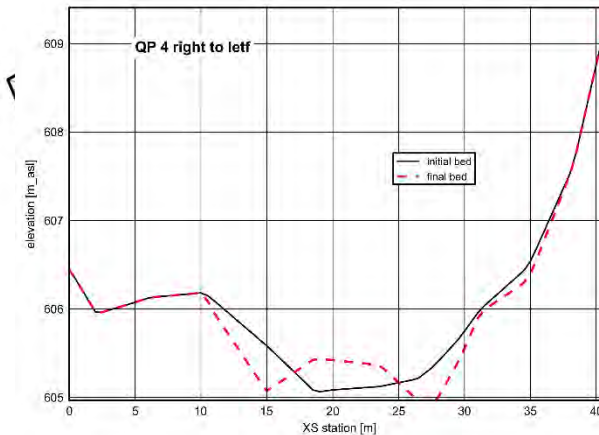
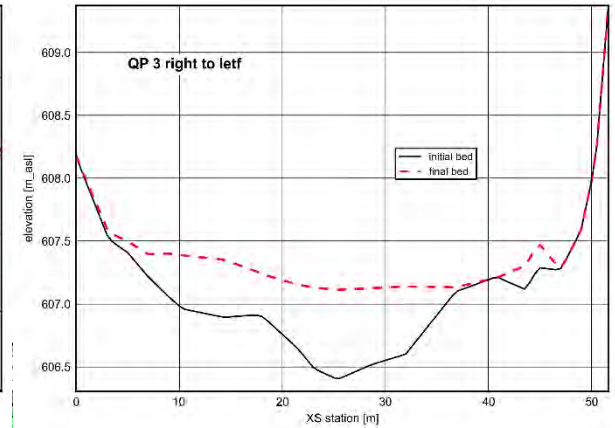
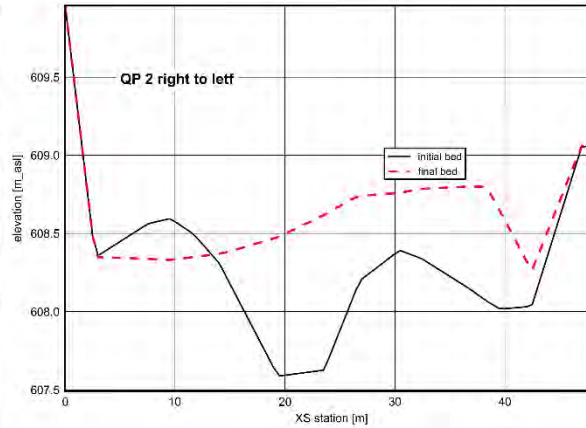
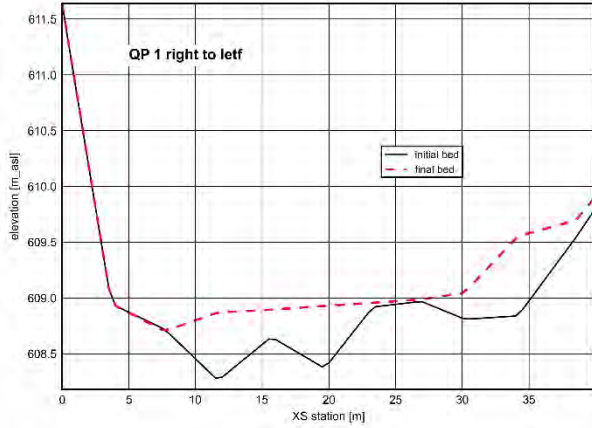
## Python API (Application Programming Interface)

```
1 """
2 Python script that produces a cross section plot from features of a layer
3 """
4 #import for QGIS crayfish
5 #-----
6 import os
7 from qgis.core import QgsGeometry, QgsPoint, QgsFeature, QgsVectorLayer
8 import crayfish
9 import crayfish.plot
10 import os.path
11 import sys
12
13 # set path to project directory with mesh (*.2dm) and result files (*.sol)
14 dir=r"D:\BASEMENT\UserMeeting\2017"
15
16 Zulg_2dm = os.path.join(dir, 'Zulg.2dm')
17 nds_results_dz = os.path.join(dir, 'Zulgboden_nds_z_node.sol')
18 cross_section_layer = os.path.join(dir, 'QP_plot.shp')
19
20 mesh = crayfish.Mesh(Zulg_2dm)
21 mesh.load_data(nds_results_dz)
22
```



```
Python Console
136 <module 'crayfish.export_Zulg.plot_all_XS_finalZ' from 'C:/Users/Stephan/.qgis2/python/plugins/crayfish/export_Zulg/plot_all_XS_finalZ.py'>
137 >>> reload(crayfish.export_Zulg.plot_all_XS_finalZ)
138 182
139 XS QP 1 is written to file
140 XS QP 2 is written to file
141 XS QP 3 is written to file
142 XS QP 4 is written to file
143 XS QP 5 is written to file
144 XS QP 6 is written to file
145 <module 'crayfish.export_Zulg.plot_all_XS_finalZ' from 'C:/Users/Stephan/.qgis2/python/plugins/crayfish/export_Zulg/plot_all_XS_finalZ.py'>
146
>>> import crayfish.export_Zulg.plot_all_XS_finalZ
```

# Python API (Application Programming Interface)





## Weitere Informationen

- Website von Lutra Consulting  
<http://www.lutraconsulting.co.uk/products/crayfish/>



- GitHub Crayfish repository
  - API Dokumentation mit Beispielen

<https://github.com/lutraconsulting/qgis-crayfish-plugin>

# Vielen Dank für die Aufmerksamkeit!

## Fragen?