

QGIS as a platform

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Oslandia**



Platform ?





WIKIPEDIA
The Free Encyclopedia

Platform technology

is a term for technology that

enables the creation of products

and processes that support present or future development. It establishes the long-term

capabilities of research & development

institutes. It can be defined as a structural or technological form from which various

products can emerge without

the expense of a new

process/technology introduction.



Platform :
Collaboration
Interoperability
Connectivity
Adaptability



QGIS is OpenSource

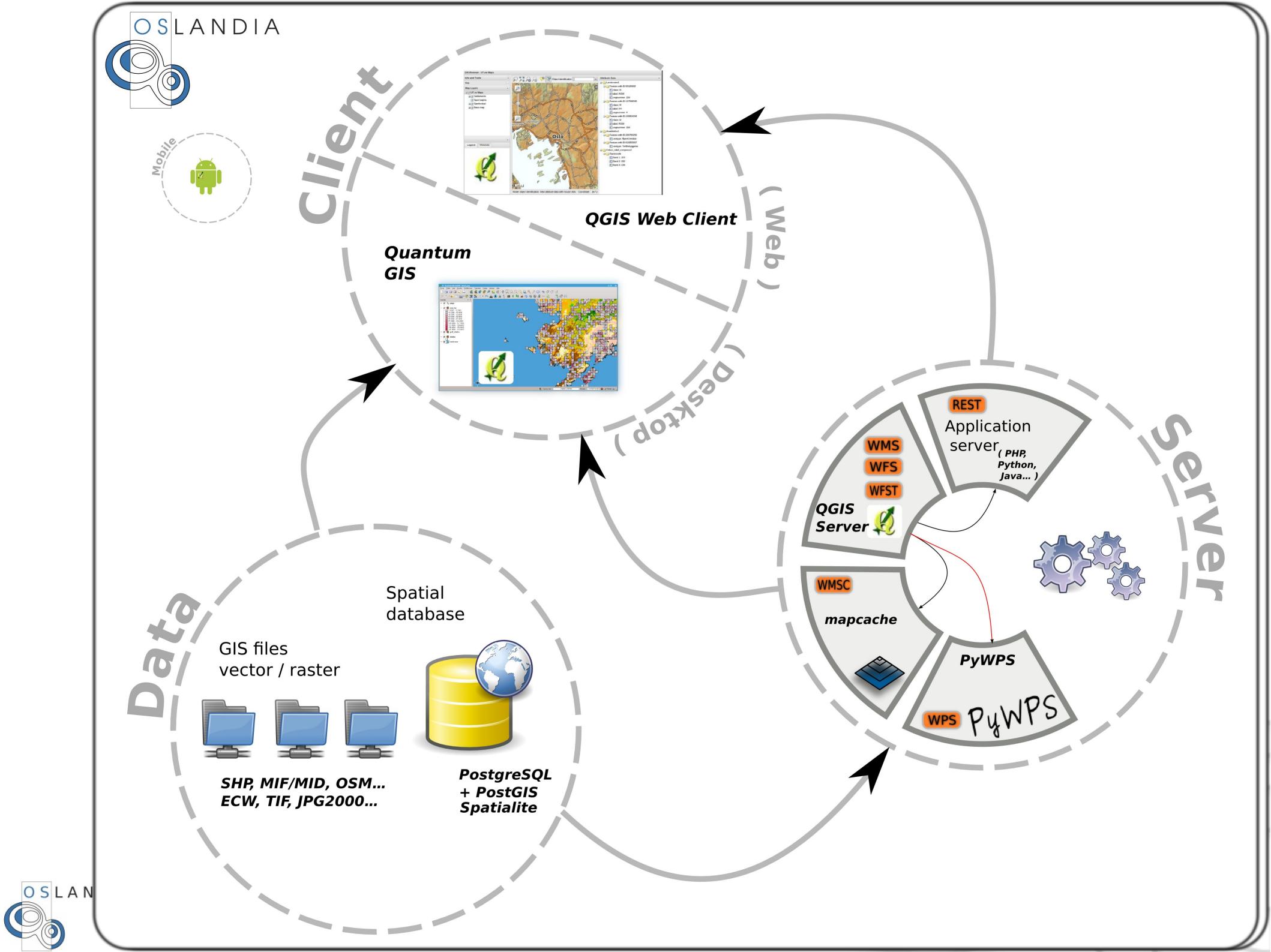
*Legal
Organisational*

Collaboration
Openness
Innovation
Reuse



Interoperability





Connectivity





OSLANDIA

Cloud WebServices



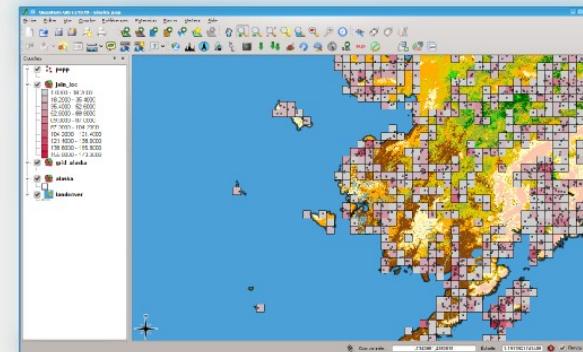
EPANET



Plugins



Quantum GIS



Spatial Database



sextante

GDAL



FTOOLS



SAGA GIS



GRASS



PostGIS



OTB



LAS



OPENCV



R



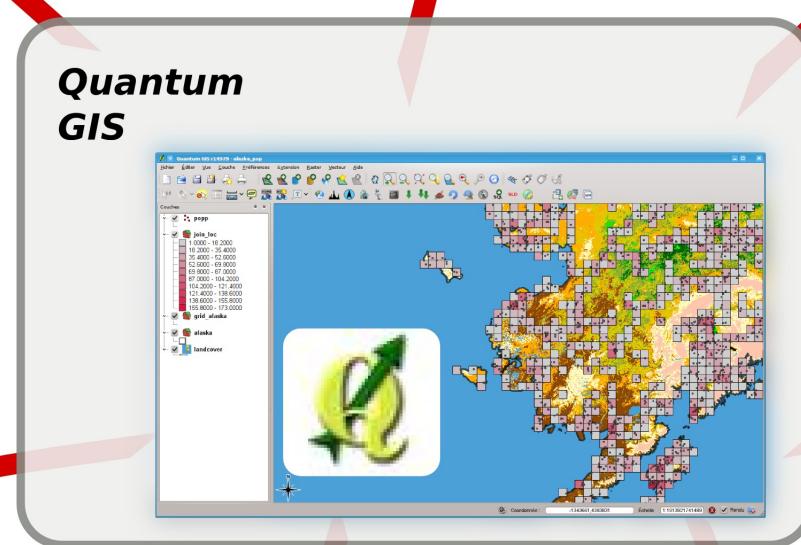
Adaptability



QGIS
Server

Custom
interface

Custom
forms



Actions

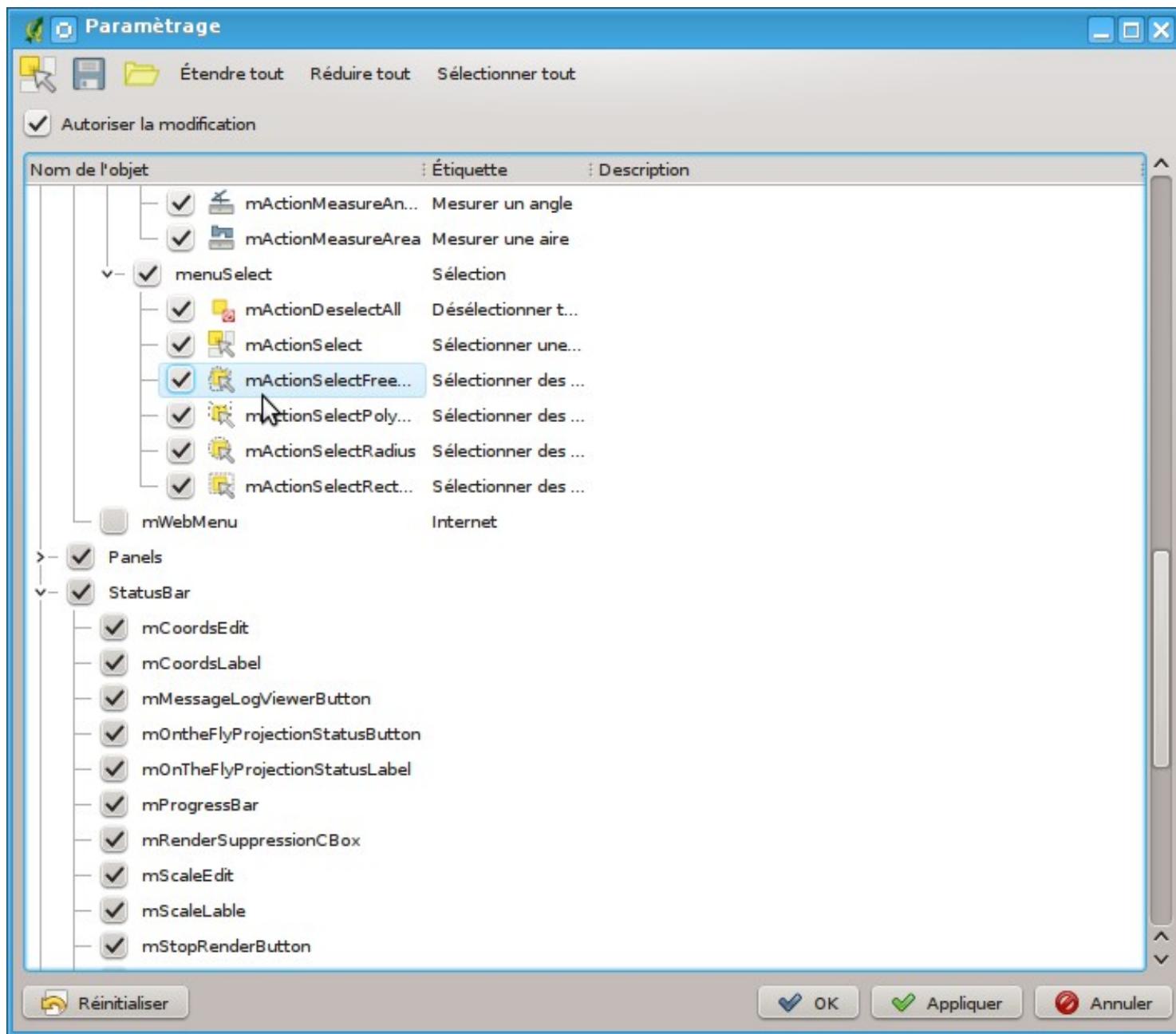
SEXTANTE

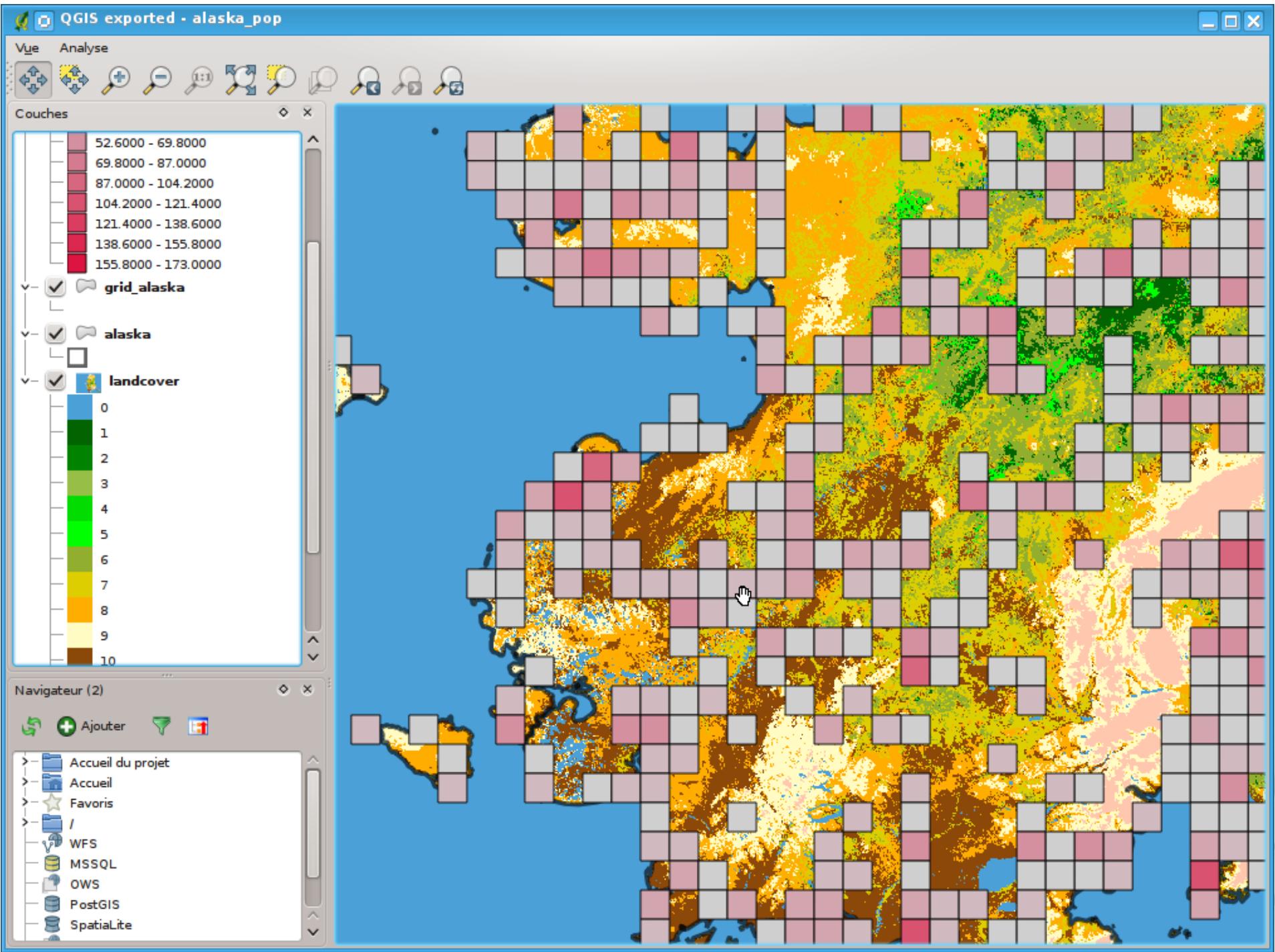
Specific
application

Plugins

Custom interface

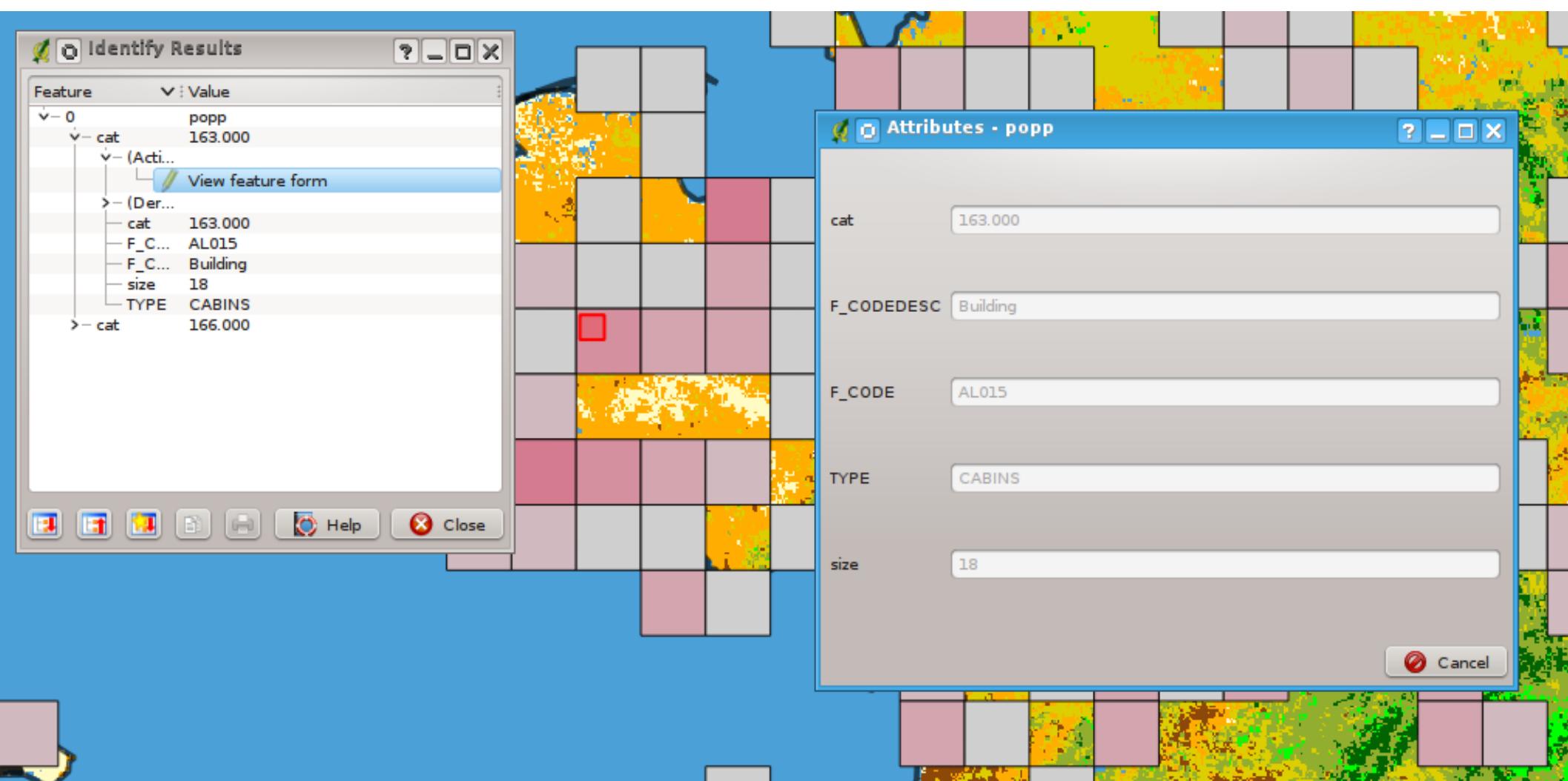






Custom forms





Layer Properties - popp

Attribute editor layout: Autogenerate

Python Init function:

ID	Name	Type	Length	Precision	Comment	Edit widget	Alias	WMS	WFS
0	cat	Real	32	3		Line edit		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1	F_CODEDESC	String	80	0		Line edit		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	F_CODE	String	80	0		Line edit		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	TYPE	String	80	0		Line edit		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	size	Integer	10	0		Line edit		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Buttons: Restore Default Style, Save As Default, Load Style ..., Save Style, Help, OK, Apply, Cancel.

Attribute Edit Dialog "F_CODE"

Editable

Label on top

Combo box with predefined items. Value is stored in the attribute, description is shown in the combo box.

Load Data from layer | Load Data from CSV file

Value	Description
1	
...	

Buttons: Remove Selected, OK, Cancel.

Load values from layer

Select data from attributes in selected layer.

Layer: popp

Value: F_CODE

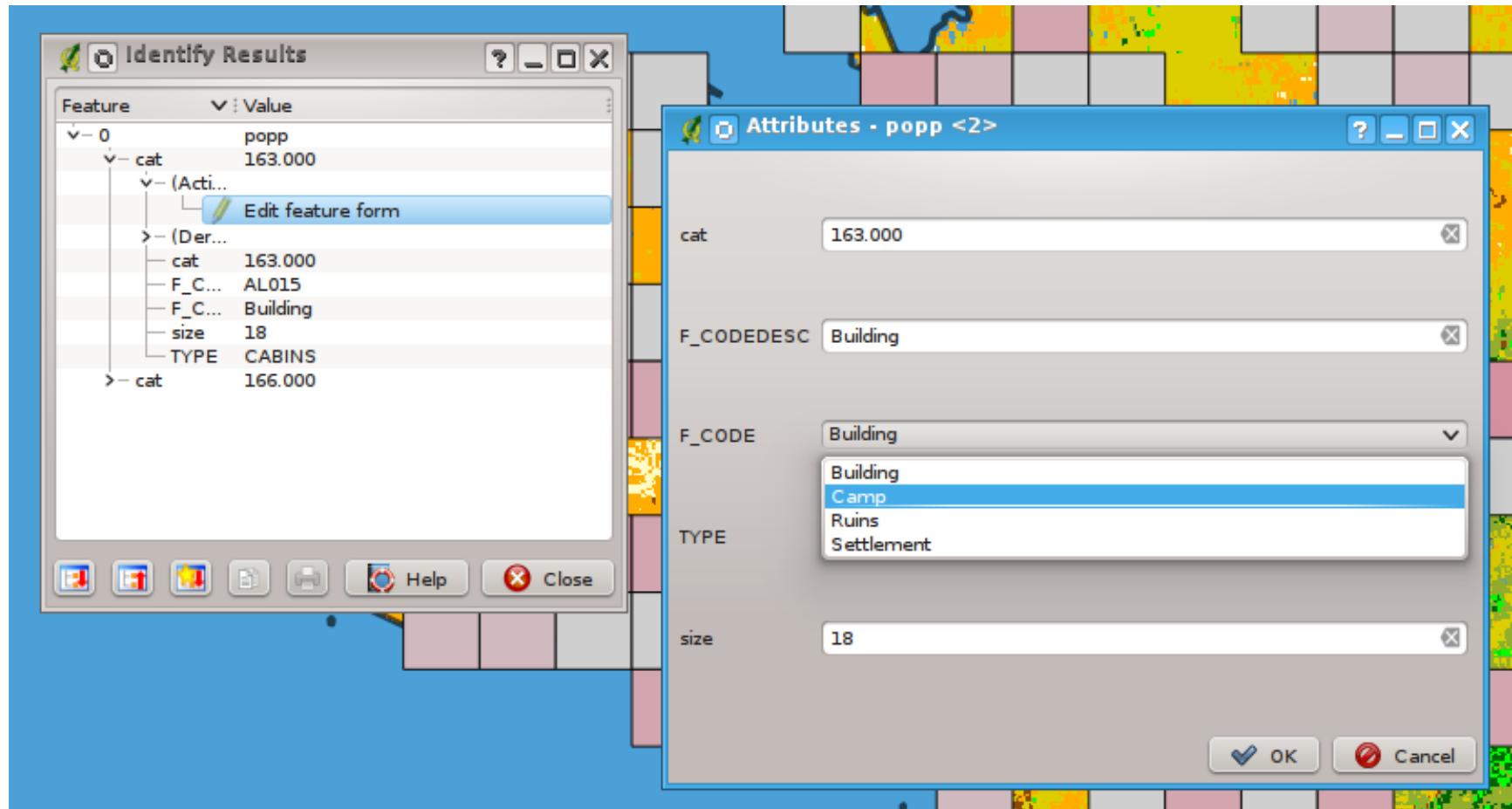
Description: F_CODEDESC

Value	Description
1 AL015	Building
2 AI030	Camp
3 AL200	Ruins
4 AL105	Settlement
5	
...	

Buttons: OK, Cancel.

OS LAN

Coordinate: -2857209, 6254941



Layer Properties - popp

Fields

Attribute editor layout: Drag and drop designer

Python Init function: [empty field]

ID	Name	Type	Length	Precision	Comment	Edit widget	Alias	WMS	WFS
0	cat	Real	32	3		Line edit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
1	F_CODEDESC	String	80	0		Line edit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2	F_CODE	String	80	0		Value map	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3	TYPE	String	80	0		Line edit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
4	size	Integer	10	0		Line edit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Label

- Main Options
 - cat
 - F_CODEDESC
 - F_CODE
- Other Options
 - TYPE
 - size

Buttons at the bottom:

- Restore Default Style
- Save As Default
- Load Style ...
- Save Style
- OK
- Apply
- Cancel

Attributes - popp

Main Options Other Options

cat 171.000

F_CODE Settlement



OK Cancel

Attributes - popp

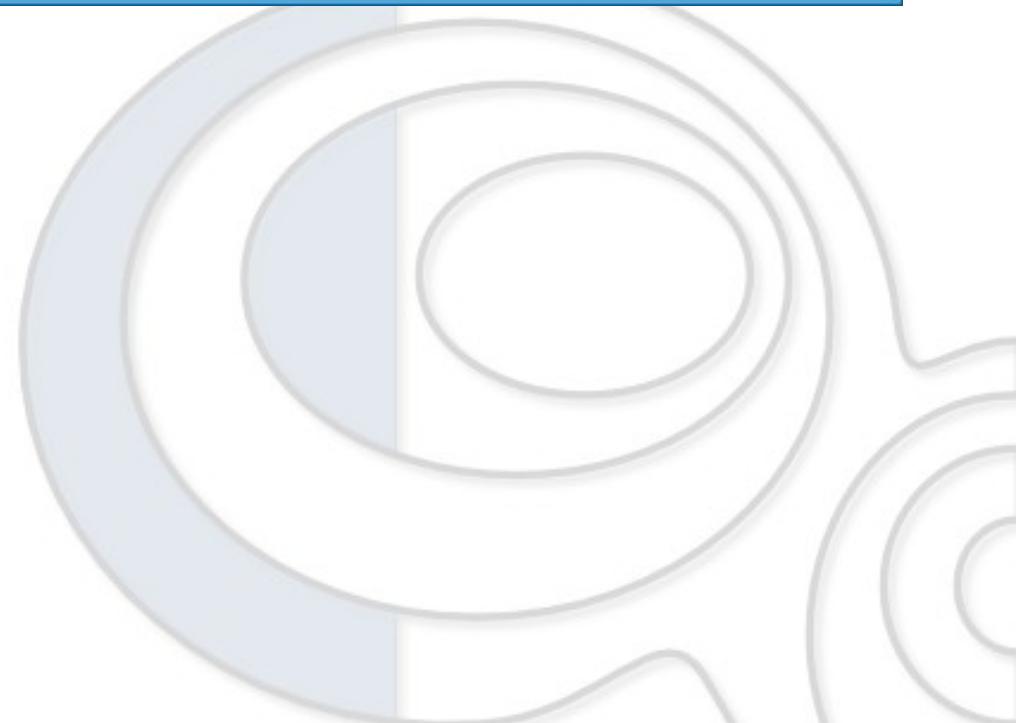
Main Options Other Options

TYPE DAHL

size 1



OK Cancel



Qt Designer

Fichier Édition Formulaire Affichage Configuration Fenêtre Aide

Boîte de widget

Layouts

- Vertical Layout
- Horizontal Layout
- Grid Layout
- Form Layout

Spacers

- Horizontal Spacer
- Vertical Spacer

Buttons

- Push Button
- Tool Button
- Radio Button
- Check Box
- Command Link Button
- Button Box

Item Views (Model-Based)

- List View
- Tree View
- Table View
- Column View

Item Widgets (Item-Based)

- List Widget
- Tree Widget
- Table Widget

Containers

- Group Box
- Scroll Area
- Tool Box

Dialog - untitled*

Search Wikipedia

Alaska

This article is about the U.S. state of Alaska. For other uses, see Alaska (disambiguation). "Alaskan" redirects here. For other uses, see Alaskan (disambiguation).

State of Alaska

Nickname(s): The Last Frontier
Motto(s): North to the Future



Official language(s)	None
Spoken language(s)	English 89.7% Native (Eskimo-Aleut and Na-Dene languages) 5.2% Spanish 2.9%
Demonym	Alaskan
Capital	Juneau
Largest city	Anchorage
Area	Ranked 1st in the U.S.
- Total	663,268 sq mi (1,717,854 km ²)
- Width	2,261 miles (3,639 km)
- Length	1,420 miles (2,285 km)

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Inspecteur d'objet

Objet : Classe

Dialog : QDialog

- F_CODE : QLineEdit
- F_C...ESC : QLineEdit
- TYPE : QComboBox
- buttonBox : QDialogButtonBox
- label : QLabel
- label_2 : QLabel
- label_3 : QLabel
- label_4 : QLabel
- size : QSpinBox
- vert...acer : Spacer
- webView : QWebView

Éditeur de propriétés

F_CODE : QLineEdit

Propriété : Valeur

QObject

- objectName : F_CODE

QWidget

- enabled : checked
- geometry : [172, 4, 78 x 22]
 - X : 172
 - Y : 4
 - Largeur : 78
 - Hauteur : 22
- sizePolicy : [Expanding, Fixed, 0, 0]
 - Politique... : Expanding
 - Politique... : Fixed
 - Étirement... : 0
 - Étirement... : 0
 - minimumSize : 0 x 0
 - Largeur : 0

Dialog - [prévisualisation]

Code	
Description	
Size	10
Type	

Abbreviations AK US-AN
Website www.alaska.gov

Alaska (ə'læska) is a state in the United States, situated in the northwest extremity of the North American continent, with the international boundary with Canada to the east, the Arctic Ocean to the north, and the Pacific Ocean to the west and south, with Russia further west across the Bering Strait. Alaska is the largest state in the United States by area, the 4th least populous and the least densely populated of the 50 United States. Approximately half of Alaska's 731,449^[4] residents live within the Anchorage metropolitan area. Alaska's economy is dominated by the oil, natural gas, and fishing industries; it has these resources in abundance.

Alaska was purchased from Russia on March 30, 1867, for \$7.2 million (\$118 million adjusted for inflation) at approximately two cents per acre (\$4.74/km²). The land went through several administrative changes before becoming an organized (or incorporated) territory on May 11, 1912, and the 49th state of the U.S. on January 3, 1959.^[5]

The name "Alaska" (Аляска) was already introduced in the Russian colonial period, when it was used only for the peninsula and is derived from the Aleut *alaxsxaq*, meaning "the mainland" or, more literally, "the object towards which the action of the sea is directed".^[6] It is also known as Alyeska, the "great land", an Aleut word derived from the same root.

Geography

History

Demographics

Economy

Transportation

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SEXTANTE





SEXTANTE Toolbox

Click here to learn more about SEXTANTE

Search...

Geoalgorithms

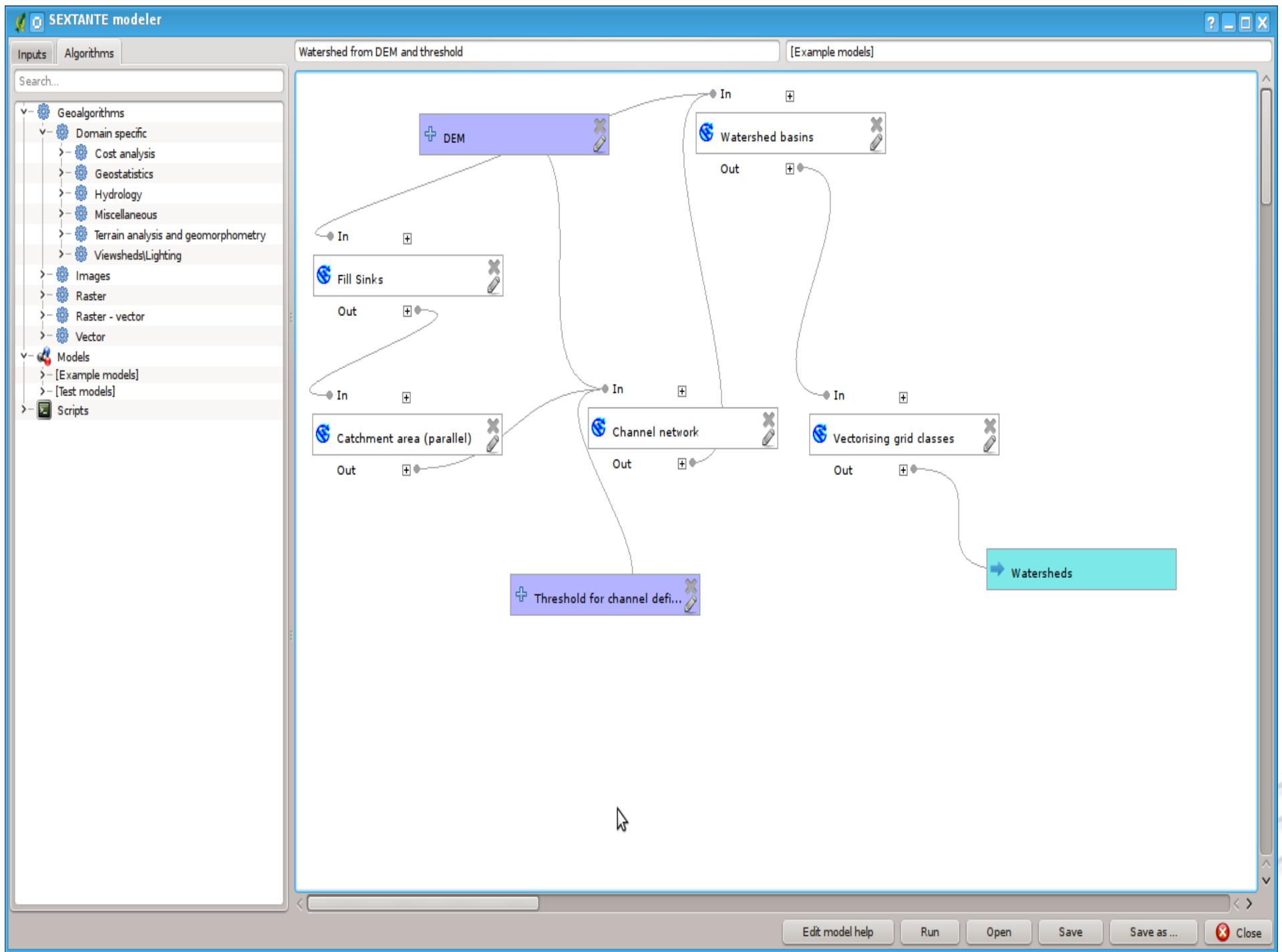
- Domain specific
- Cost analysis
- Geostatistics
- Hydrology
 - Burn stream network into dem
 - Catchment area (flow tracing)
 - Catchment area (mass-flux method)
 - Catchment area (parallel)
 - Catchment area (recursive)
 - Cell balance
 - Channel network
 - Channel network and drainage basins
 - Flow path length
 - Flow width and specific catchment area
 - Overland flow - kinematic wave d8
 - Overland flow distance to channel netw...
 - Saga wetness index
 - Sink drainage route detection
 - Sink removal
 - Strahler order
 - Stream power index
 - Topographic wetness index (twi)
 - Vertical distance to channel network
 - Water retention capacity
 - Watershed basins
- Miscellaneous
- Terrain analysis and geomorphometry
- Viewsheds\Lighting

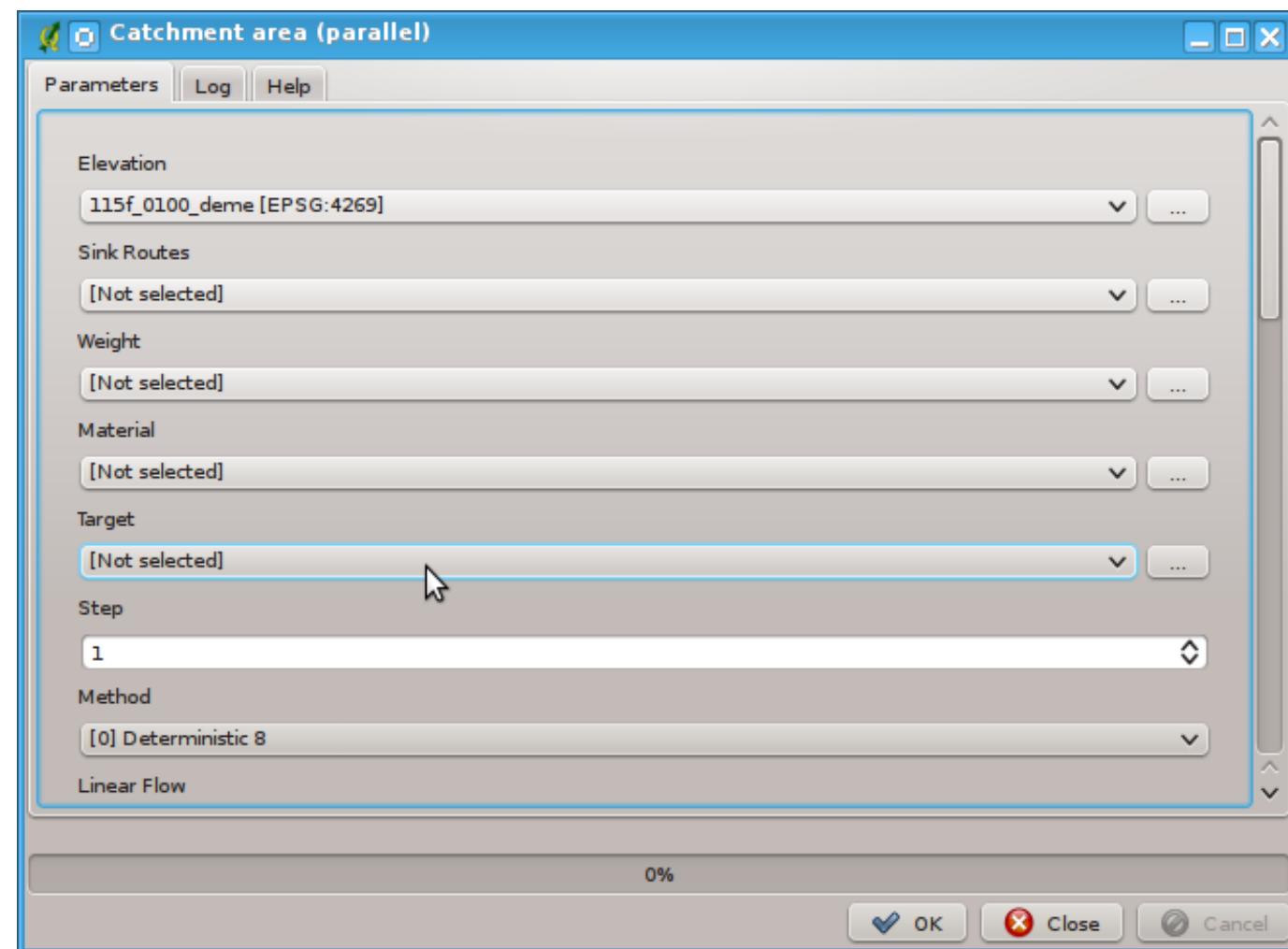
- Images
- Raster
- Raster - vector
- Vector

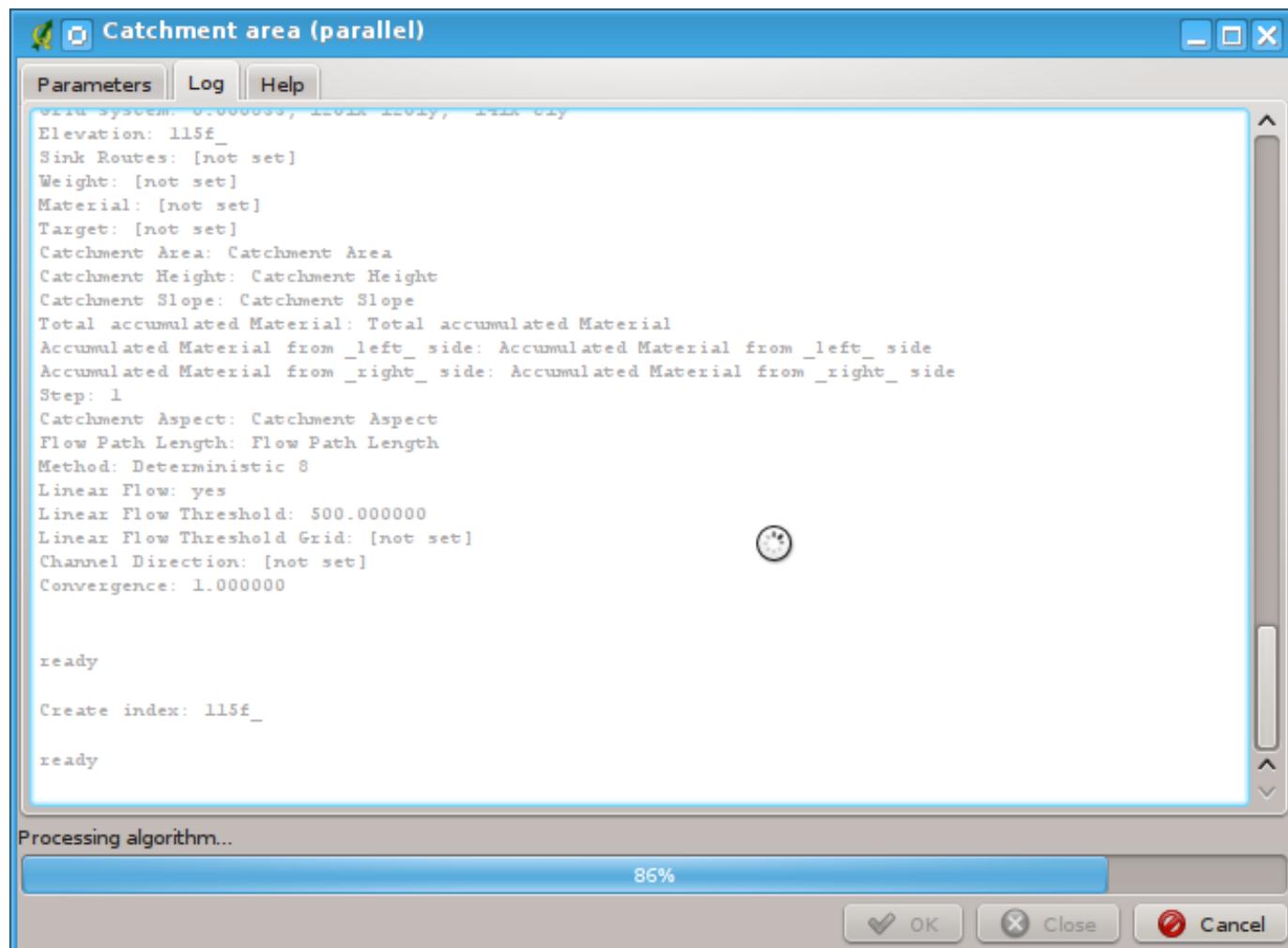
Models

- [Example models]
- [Test models]
 - A basic model
 - A model with a script
 - A model with an empty string
 - A model with an optional field
 - A model with no parameters
 - A SAGA and GRASS model
 - Model using field input and autoextent
 - Model using field input and extent input
 - Model using numerical output
 - Model with algorithms not in running order
- Scripts

Simplified interface

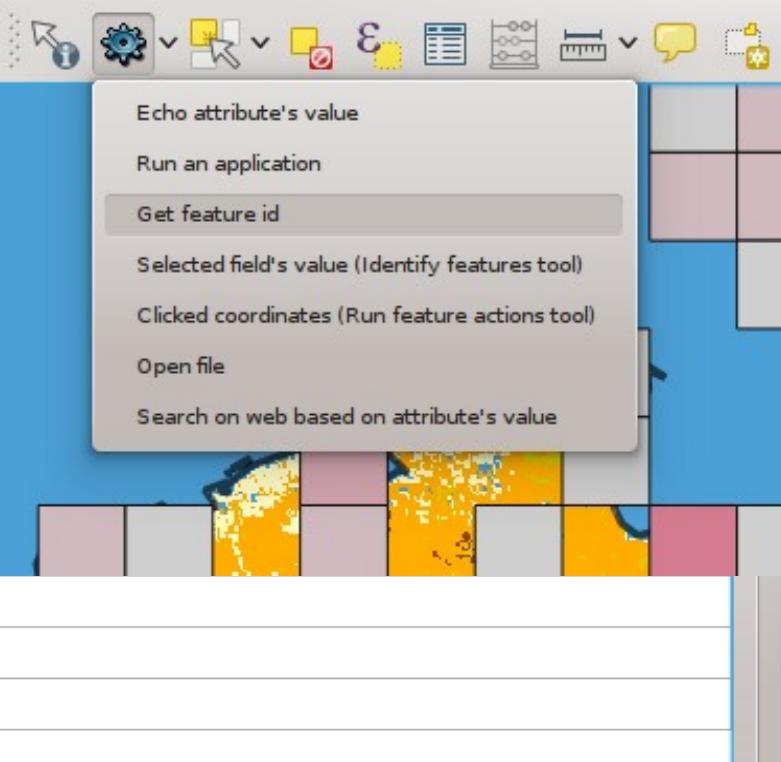






Actions





Layer Properties - popp

Actions

Action list

Type	Name	Action
Generic	Echo attribute's value	echo "[% "MY_FIELD" %]"
Generic	Run an application	ogr2ogr -f "ESRI Shapefile" "[%" ...]
Python	Get feature id	QtGui.QMessage...
Python	Selected field's value (Identify features tool)	QtGui.QMessage...
Python	Clicked coordinates (Run feature actions tool)	QtGui.QMessage...
Open	Open file	[% "PATH" %]
Open	Search on web based on attribute's value	http://www.google...

Add default actions

Action properties

Type: Python

Name: Get feature id

Action:

```
QtGui.QMessageBox.information(None, "Feature id", "feature id is [% $id %]")
```

Insert expression... cat Insert field

Add to action list Update selected action

Restore Default Style Save As Default Load Style ... Save Style

OK Apply Cancel

General
Style
Labels
Labels (deprecated)
Fields
Display
Actions
Joins
Diagrams
Metadata

Layer Properties - popp

Actions

Action list

Type	Name	Action	Capture
1 Generic	Echo attribute's value	echo "[% "MY_FIELD" %]"	<input checked="" type="checkbox"/>
2 Generic	Run an application	ogr2ogr -f "ESRI Shapefile" "[% ..."	<input checked="" type="checkbox"/>
3 Python	Get feature id	QtGui.QMessage...	<input type="checkbox"/>
4 Python	Selected field's value (Identify features tool)	QtGui.QMessage...	<input type="checkbox"/>
5 Python	Clicked coordinates (Run feature actions tool)	QtGui.QMessage...	<input type="checkbox"/>
6 Open	Open file	[% "PATH" %]	<input type="checkbox"/>
7 Open	Search on web based on attribute's value	http://www.google...	<input type="checkbox"/>

Add default actions

Action properties

Type: **Python**

Name: Add layer on hydrologic network before clicked river

Action:

```

on
    sg.gid = carthage.gid
-- on limite toujours les resultats pour ne pas avoir de boucle infinie meme
-- si on s'est trompe dans les criteres d'arret
limit 50000
""% [% "gid" %]

# code to add layer
uri = QgsDataSourceURI()
uri.setConnection(server, str(port), dbname, dbuser, dbpassword)
uri.setDataSource("","(" + query + ")", 'geom', "", 'gid')
vl = qgis.utils.iface.addVectorLayer( uri.uri(), 'Action result', "postgres")

```

Buttons:

- Insert expression...
- cat
- Insert field
- Add to action list
- Update selected action
- OK
- Apply
- Cancel

Bottom Buttons:

- Restore Default Style
- Save As Default
- Load Style ...
- Save Style
- Help

QGIS Server & web client



QGIS WebServices

WMS, WFS(-T), ++

Build your own app

OL3, LeafLet, GeoExt...

GeoDjango, PHP, Java...

Use existing

QGIS Web client

QGIS Browser

LizMap

Plugins



Open world !

Python + lib (or C++)

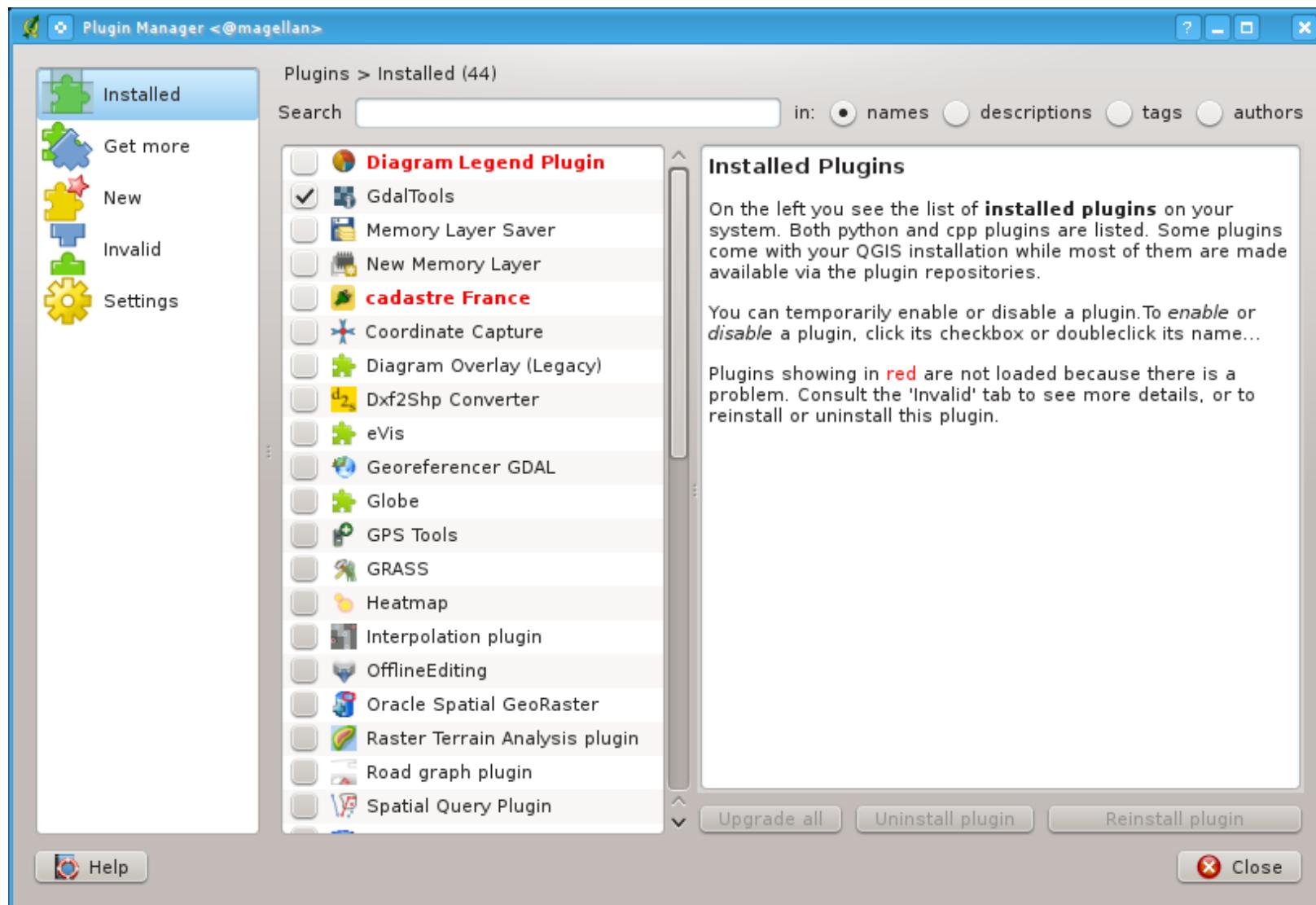
PyQGIS API

PyQT, QT Designer

Custom DB access

Ext. Python modules

> 250 plugins (/!\ QGIS 2.0)



InSAFE 0.3.0-alpha

Pertanyaan

Jika terjadi

Sebuah terulangnya banjir Jakarta 2007*

Berapa banyak

Penduduk Jakarta

Yang gunakan

Perlu Evaluasi

Hasil

Jika terjadi "Sebuah terulangnya banjir Jakarta 2007*" perkiraan dampak terhadap "Penduduk Jakarta" kemungkinan yang terjadi:

Perlu Evaluasi (x 1000):	335
Bantuan	Jumlah
Beras [kg]	937
Air Minum [l]	5962
Air Bersih [l]	22445
Kit Keluarga	67
Jambon Keluarga	16

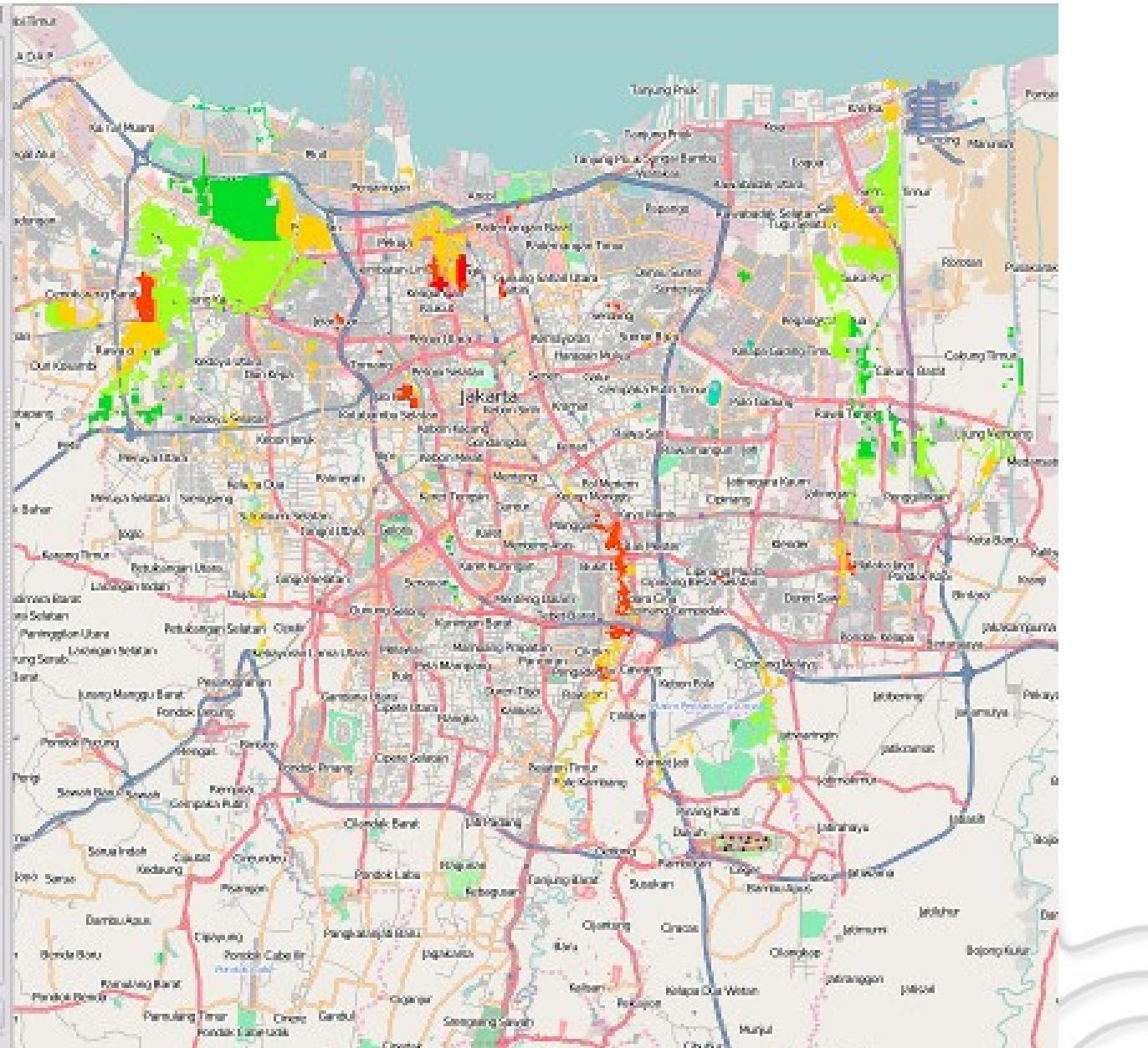
Catatan:

- Jumlah penduduk Jakarta 6378
- Jumlah dalam ribuan
- Penduduk perlu dievaluasi ketika banjir lebih dari 1 m.
- Minimum Bantuan per minggu (BNPB Perka 7/2008)

 Didukung oleh AusAID dan Bank Dunia

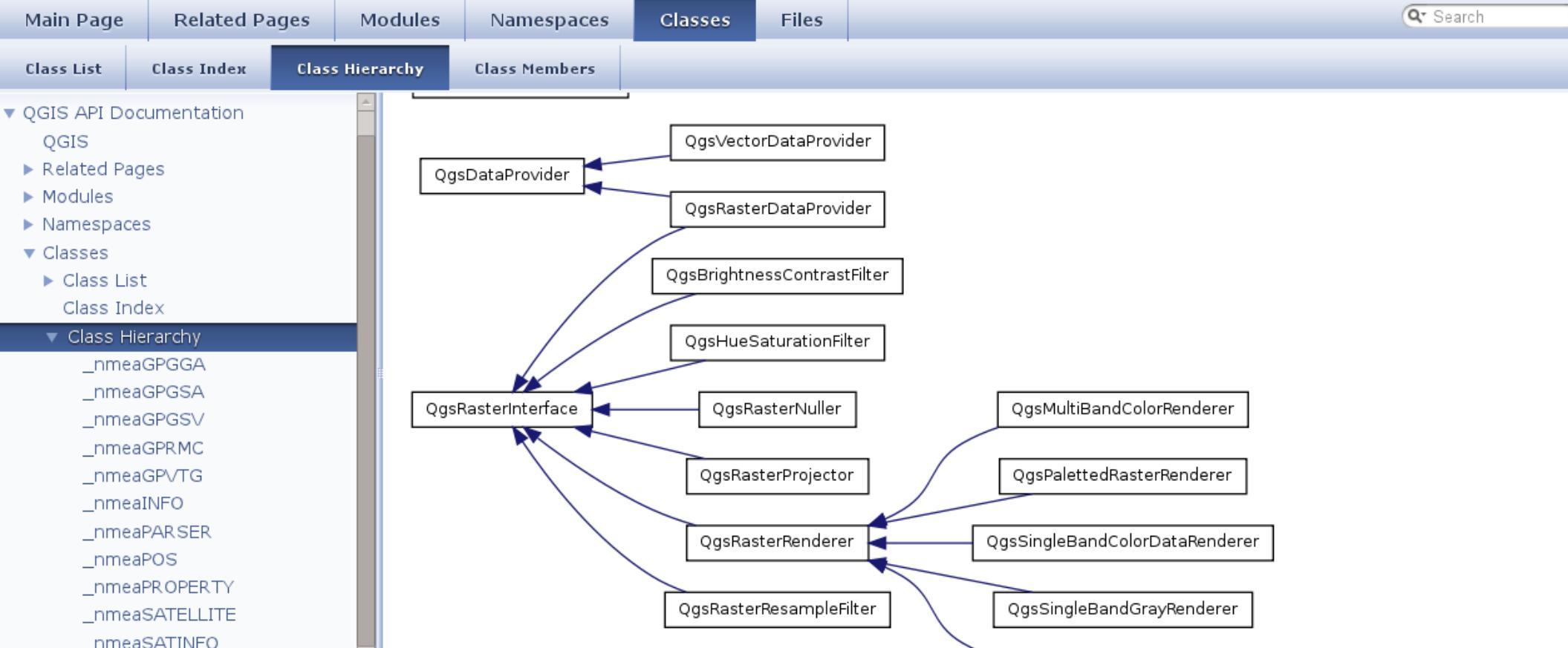
Bantuan Print... Hitung

InSAFE 0.3.0 alpha Laporan/Laporan



QGIS API Documentation

master-192e130



Specific application



Custom app

**No QGIS interface
Use PyQt + PyQGIS
Target very specific needs**

MENU Entrée Géographique Anomalies Interventions Suivi hebdomadaire AOT Campagnes de relevés



Ouvrages

Déversoir

AD

Propriété et Gestion : Conseil Général du Bas-Rhin
Ouvrage constitutif du barrage d'Avolsheim

Nom de l'ouvrage Déversoir AD

Commune Avolsheim

Tronçon Bief 1

Rive En travers du lit

Localisation Le Canal, à l'entrée de l'édifice

Altitude 168.914



Historique des anomalies constatées sur l'ouvrage

2013-04-02: Embâcles -> travaux : pas de travaux prévus

2013-05-22: test -> travaux : pas de travaux prévus

Historique des travaux prévus ou réalisés

	travaux	suivi
1	Enlèvement d'embâcles	travaux réalisés le 2011-12-15, montant : 550 euros
2	Réfection de l'ouvrage	travaux prévus : Bon de commande à éditer
3	Travaux de maçonnerie	travaux réalisés le 2011-12-15, montant : 1000 euros

981261.06 , 109223.45

GeOCaB - Gestion Opérationnelle du Canal de la Bruche

MENU Entrée Géographique Anomalies Interventions Suivi hebdomadaire AOT Campagnes de relevés

Edition anomalies

Filtres

Oui Non Année 2013

	id	Date	Description
1	7	14/03/2013	Caravane sur le domaine public
2	3	09/01/2013	Véhicule immergé
3	2	09/01/2013	Piles du pont
4	8	02/04/2013	Embâcles
5	11	22/05/2013	test
6	9	07/05/2013	Décharge illicite déchets verts
7	10	07/05/2013	Embâcles
8	4	31/01/2013	Clôture sur limite parcelle
9	12	22/05/2012	Délitement pile

981385.1 , 109638.93

Edition ligne

Identifiant	2
Axe	canal
PK amont	1762.7
PK aval	1930.6
Position	Rive Droite
Décalage	10

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Anomalie

Référencement

Tronçon Brief 4
Ouvrage -
Commune Eckolsheim

Anomalie

Suivi hebd. 2013_2
Type anomalie Obstacle à l'écoulement
Date 2013-01-09

Photos

Description

Véhicule immergé

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QGIS : **Desktop GIS**



QGIS : **GIS platform**



Questions ?

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