Inhalt

Introduction

First of all, mapping in Cities Xl is not easy! Sadly the developers haven't published anything for mapping. But the modding community created their own tools.

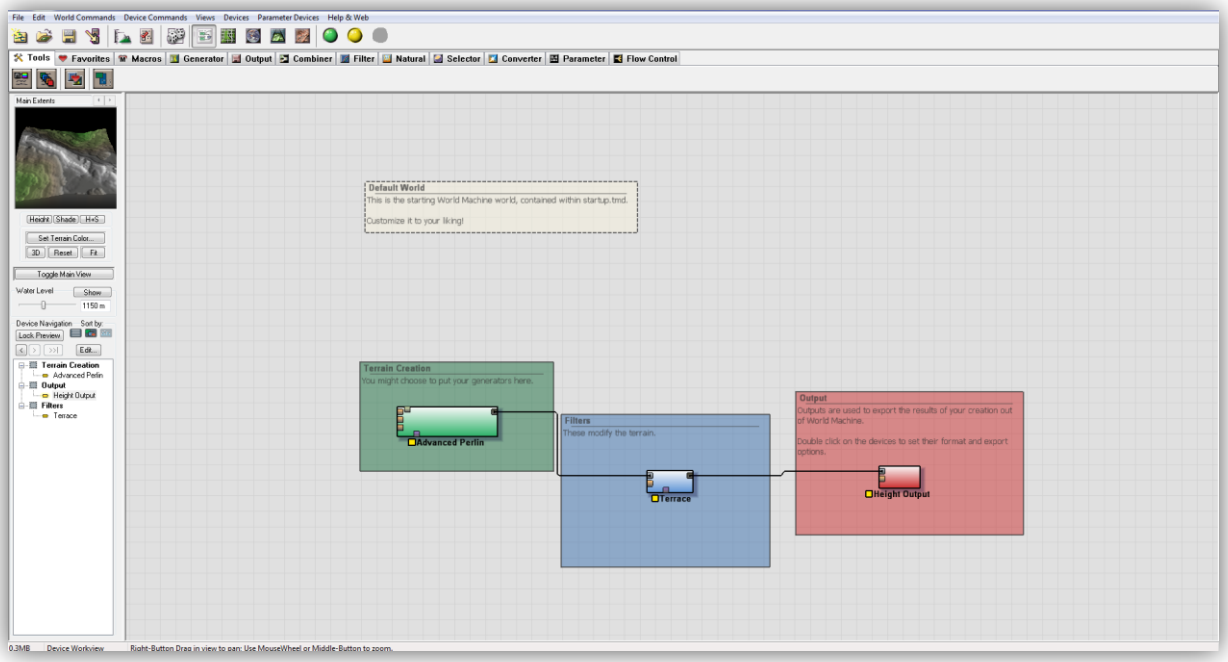
Programs

Here is a list of programs you will need (There are several ways to a map, some programs can be replaced some not):

1. World Machine
   This program allows you to do the basic mapping with some great features. You can use another program too, if you find the right one. Criterions here (linken)
2. Photoshop
   You will need the DDS Plugin for editing and saving the files. There is a way with GIMP but yet I haven't got the solution. Paint.net is not useable for that process. You can use it for the preview image too. (PS link is just a trial version)
3. Cities Xl MapEditor + Update
   With this program you combine the files you created before to one map.
4. Hxd
   This is a basic Hex Editor you need for the UIM implementation.
5. Editor
   For the UIM implementation.
6. Okeanos Pack
7. Okeanos Unpack
8. Cities Xl Pak/Unpak
9. Cologne

First Step

Download all the programs and start the World Machine.
Basically it should look like that picture on the bottom:

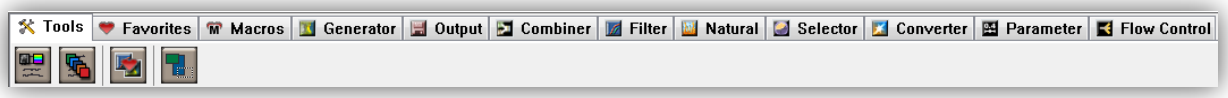


As you can see there is already something created. You have to deleted the devices

Devices

They are the essential things for the World Machine. These fields in the back are just for a better view. You can delete them if you want, I recommend to keep them up.

How to add Devices?



On this bar you can find several devices

For mapping in cxl you will need:

1. **Generators**
   A Generator produces the terrain.
   a. **Layout Generator,**
      you can use shapes to make the terrain (boxes, polygons, circles, lines)
   b. **Perlin Noise,**
      a good generator, set the settings by double clicking the device.
   c. **Advanced Perlin**
   d. **Constant,**
      creates a flat terrain.
   e. **Gradiant**
   f. **Radial Grad,**
      creates one special shape in the mid of the map.
   g. **Voronoi,**
      a special generator
   h. **Color Generator**
   i. **File Input,**
      pretty useful, import a heightmap (example) or other files.

2. **Filters**
   They filter the terrain of the generators.

3. **Naturals**
   In the category "Natural" you can find tools like erosion and snow.

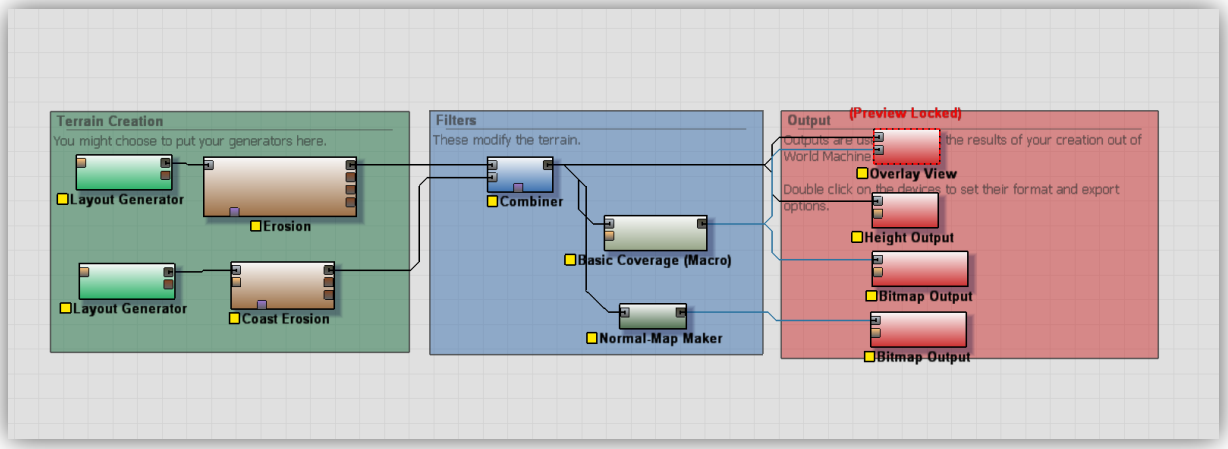
4. **Output**
   These devices put out the files you need for the mapping tool.

5. **Converters**
   Here you will just need the Normal-Map Maker.

6. **Macros**
   Macros are small tools. You will only need the Basic Coverage macro.

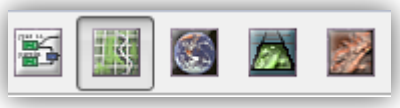
Example

This should be the result



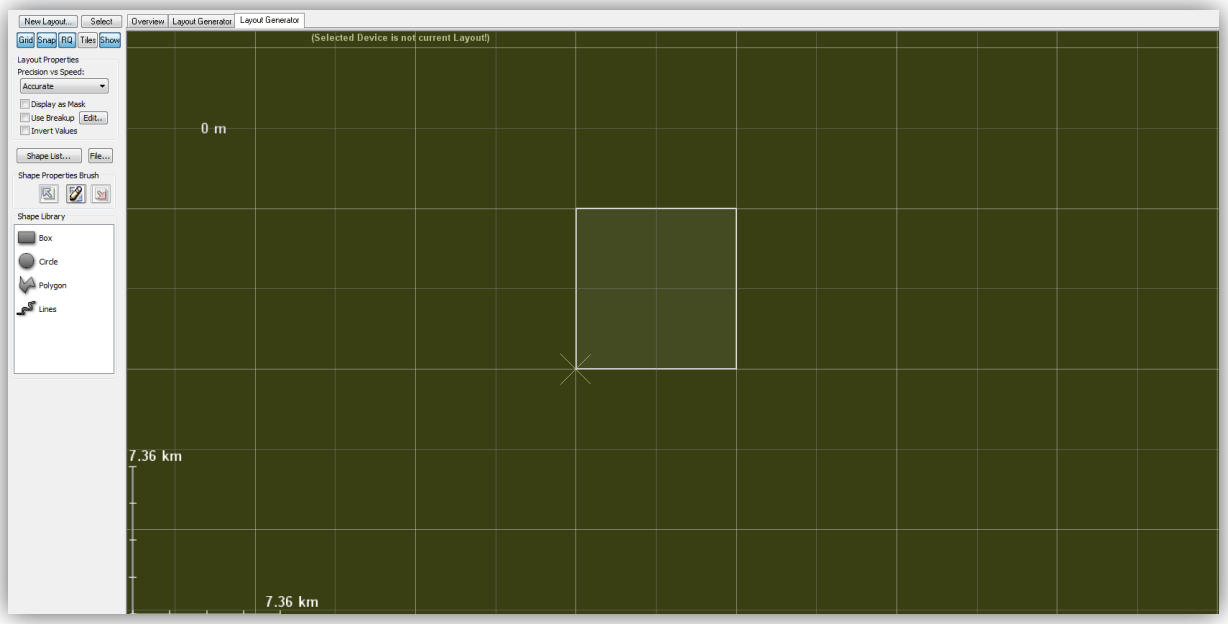
Terrain Creation

I choosed 2 Layout Generators. 1 for the coast and 1 for the hills. Double click 1 layout generator. On the top you can see such icons:



With the first you can get back to the Device View, with the second you can get to the Layout View, and the fourth is a 3d view.

If you double clicked it you get such a screen:



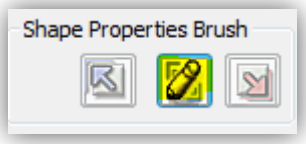
You might have to zoom out a bit to see this box.

Controls:

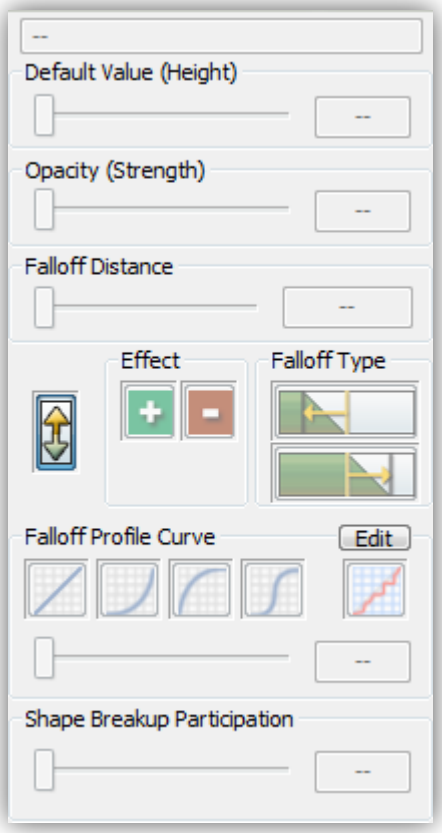
Left click – select something
Right click - navigate
Mouse wheel – zoom in or out, rotate camera

Here you can change between the generators:

You have to activate the Brush Properties



→



As you can see there are several options, just experiment a bit. The height of the water ingame depends on the .lvl file you choose.

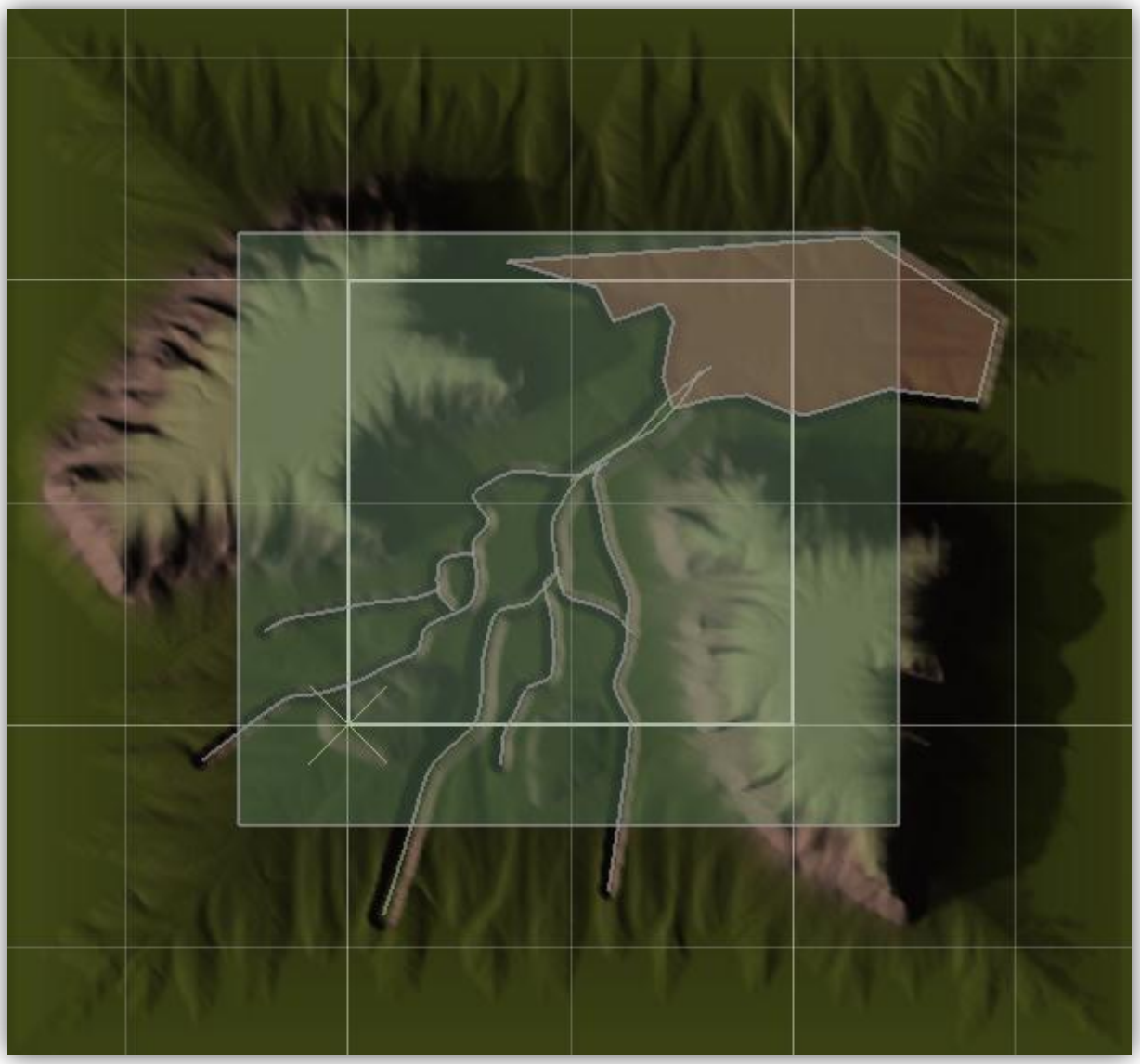
Now choose a box, with the same height, from the shape library and put it over the white box at every layout generator (= the are you will export). This is optional.

Btw. I changed my coast erosion to a thermal erosion, because it's smoothing better

1st layout:

I used polygon for the hills with a small falloff distance

2nd layout:



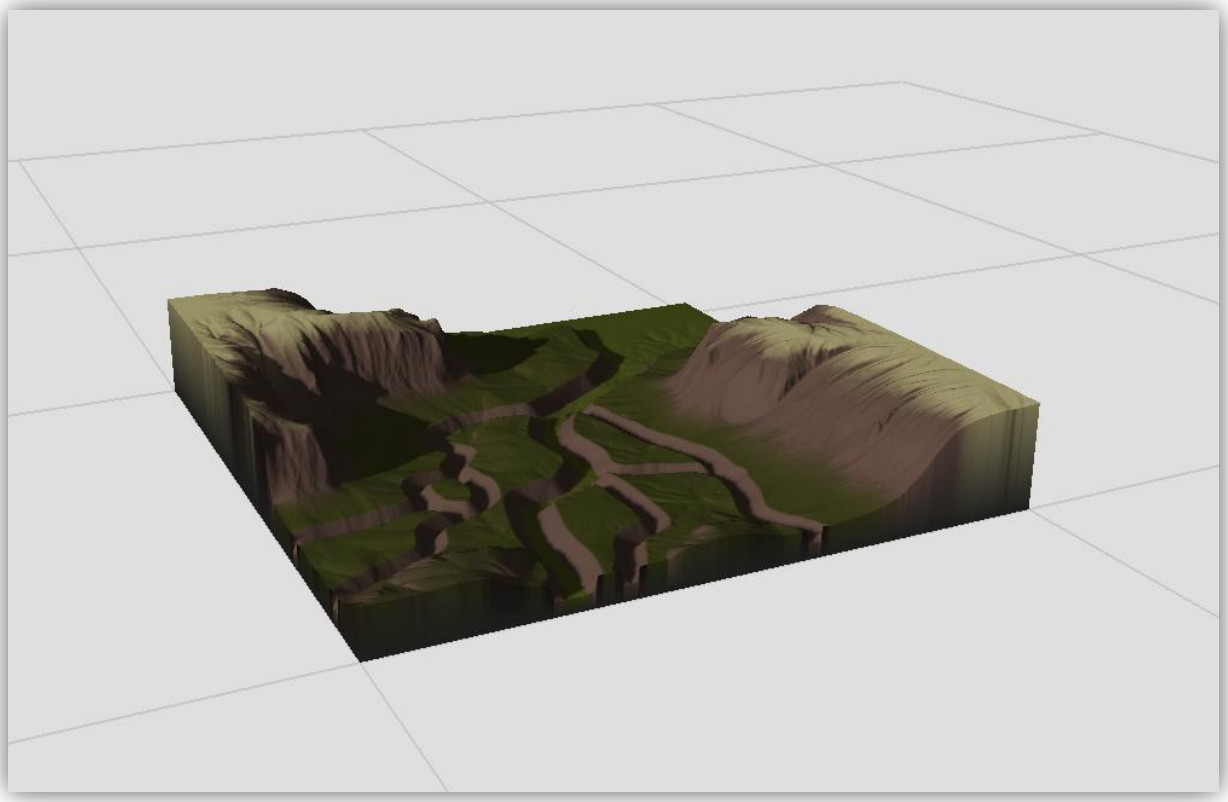
Here I used lines for the rivers and a polygon for the sea/lake.

With the erosion you just have to experiment or choose a preset.

Pre-build

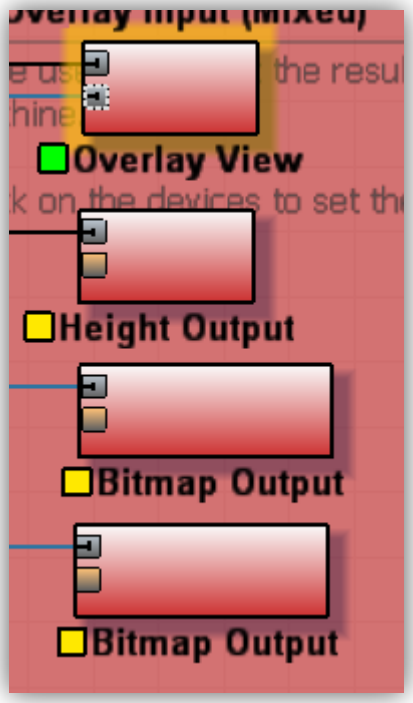
If you want to see the result of the erosion and the generators in full quality select the overlay view device and click the yellow button:

and choose the 3D view



Output settings

In the next step you set the settings of the output devices.

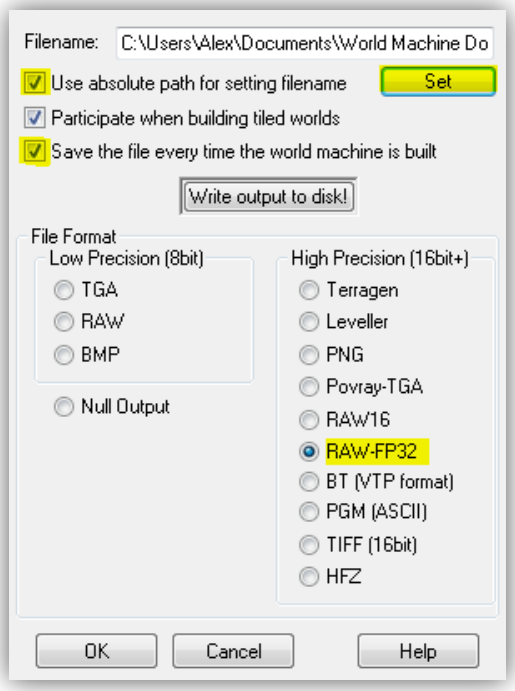


- Overlay View, is a preview device
- Height Output, for the heightmap creation
- 1st Bitmap Output, for the colormap
- 2nd Bitmap Output, for the shadowmap

You can rename the devices if you want.

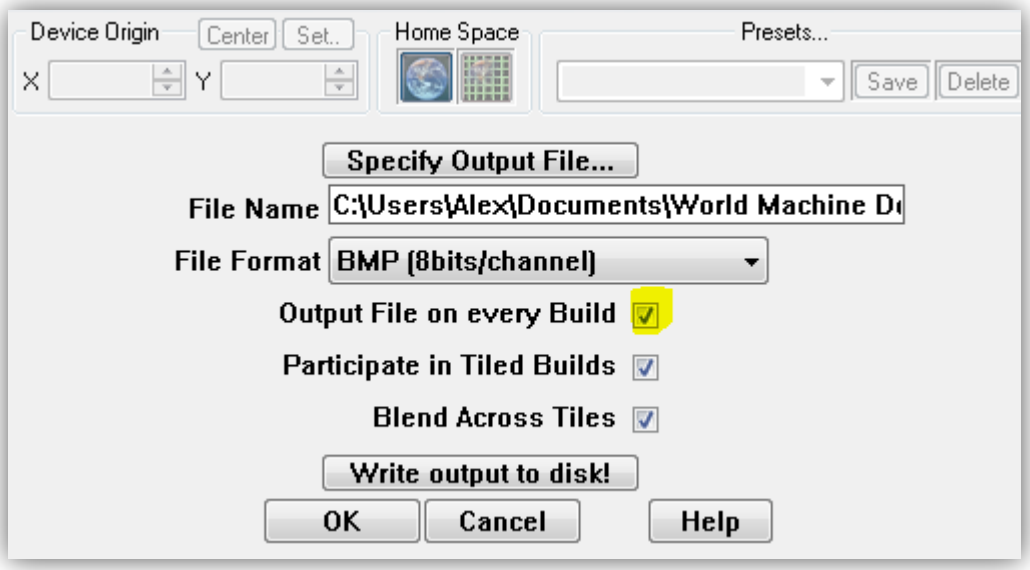
Height Output

double click it…



Set a path and as name “heightmap”, select RAW-FP32 and tick the 1st and the 3rd.

Colormap



Set a path and the name "colormap" and tick the 1st "Output File on every Build", like at the heightmap it will save the output file on every Build if you click the green button.

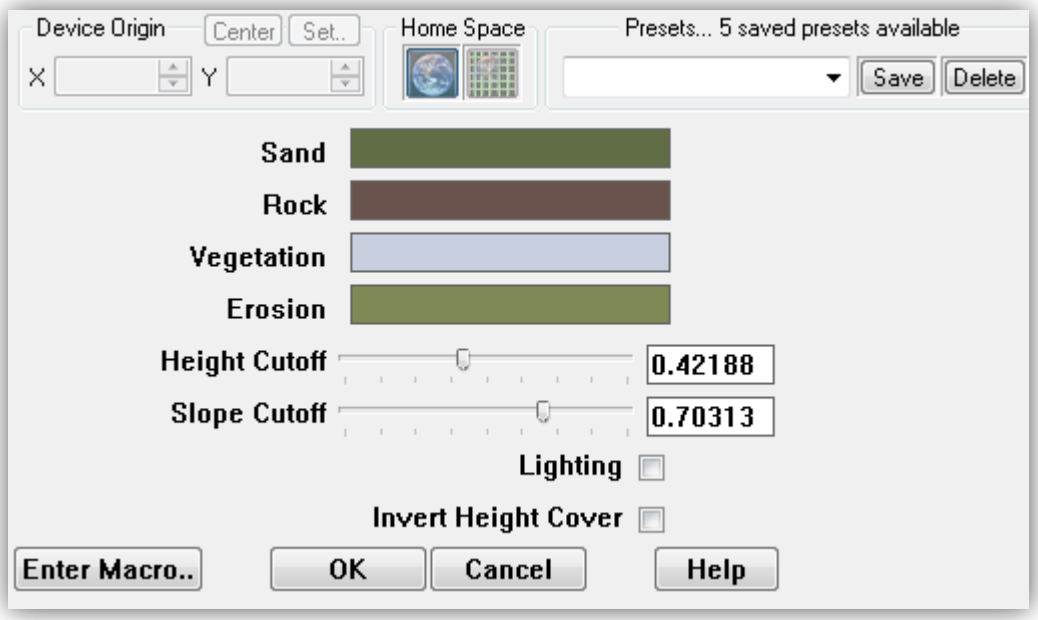
Shadowmap

Do the same on the last bitmap generator, just with the name "shadowmap"

Filters

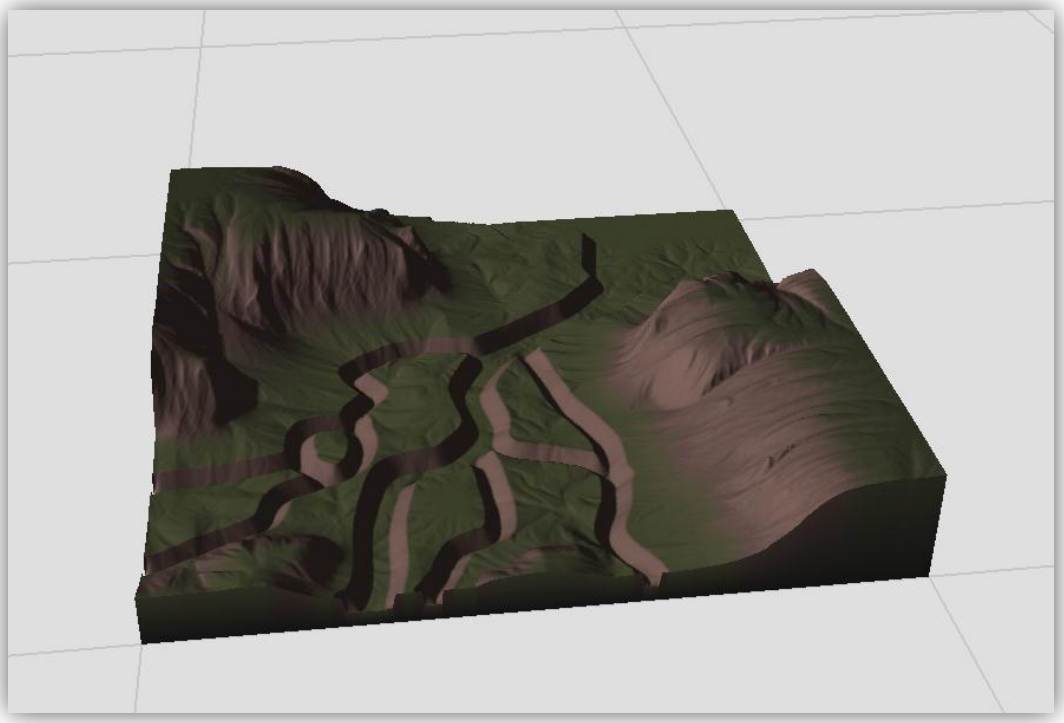
Basic Coverage

Here you can set the color of the map. Double click the device!



I took a preset: Pacific northewest

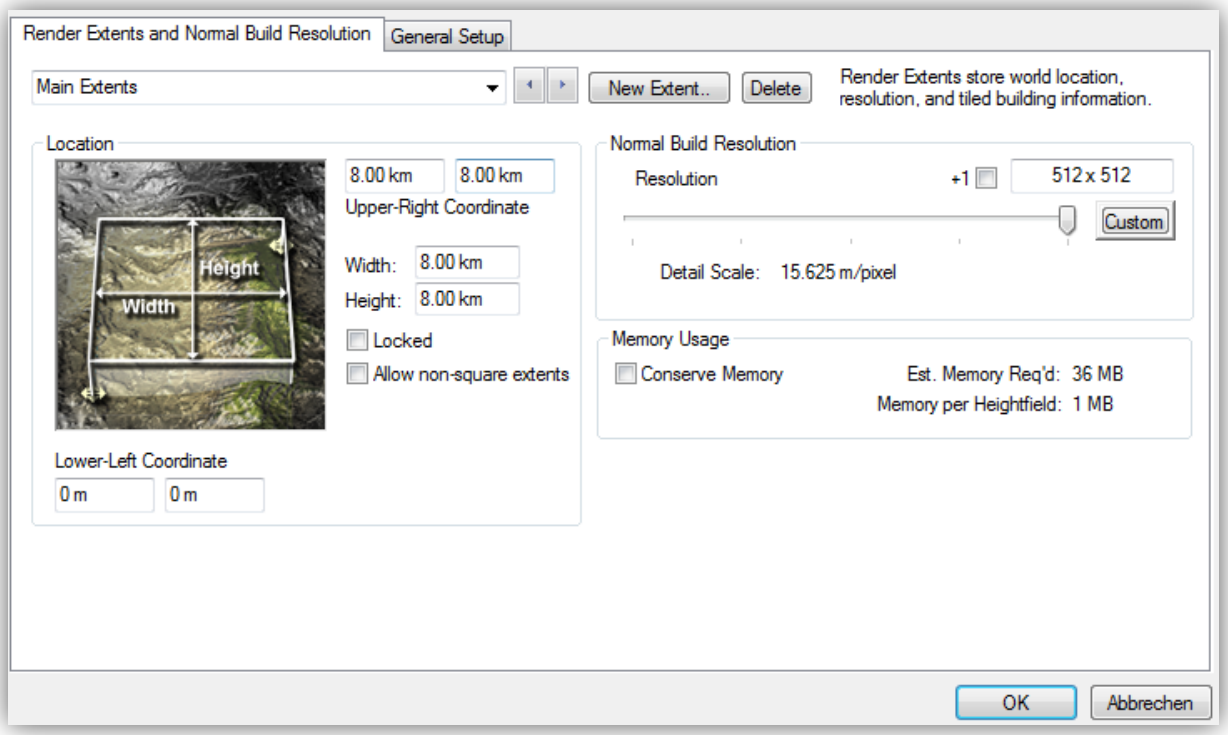
Lighting should not be selected!



Export

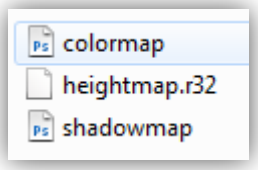
Select the “World extens and Resolution” icon

and remove the tick at Resolution.. it will change to 512x512



Now build it with the green button and open the path to the files

You should have 3 files now:



Photoshop

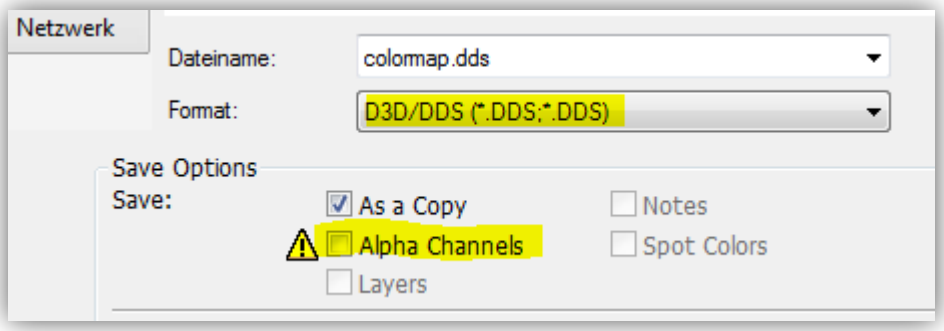
Now you have to do some photoshopping and make some new pics for the ressources,...

Colormap

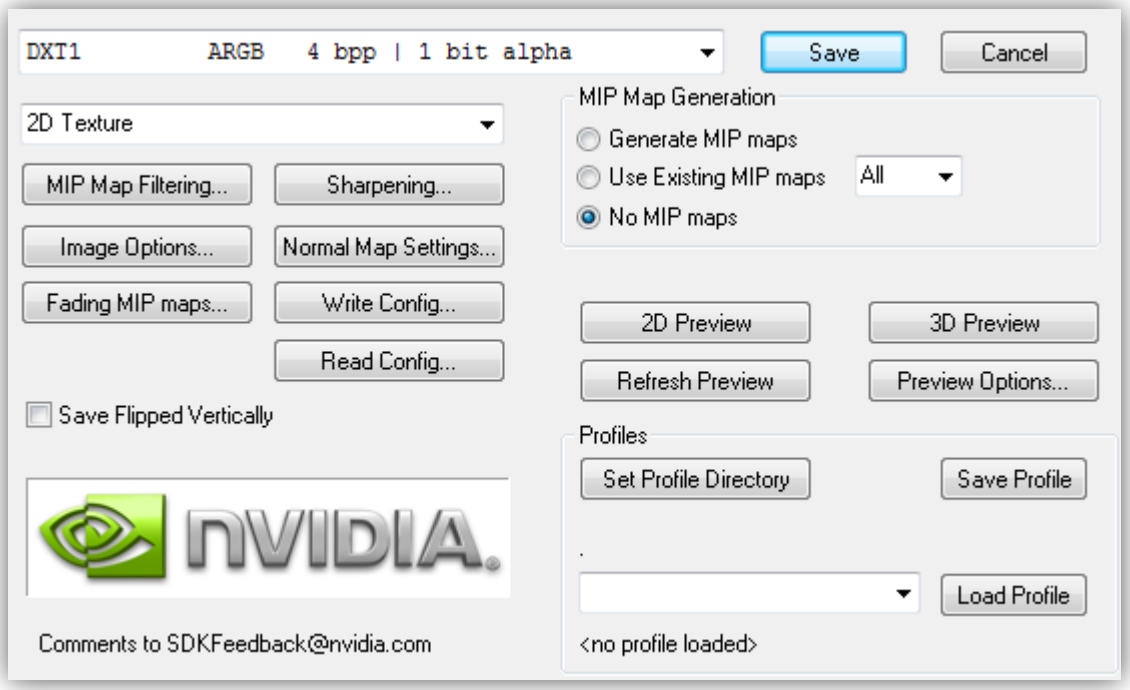
Open the colormap with photoshop.

(I will edit the color of the seafloor a bit)

Save it as .dds and remove the tick from alpha channels

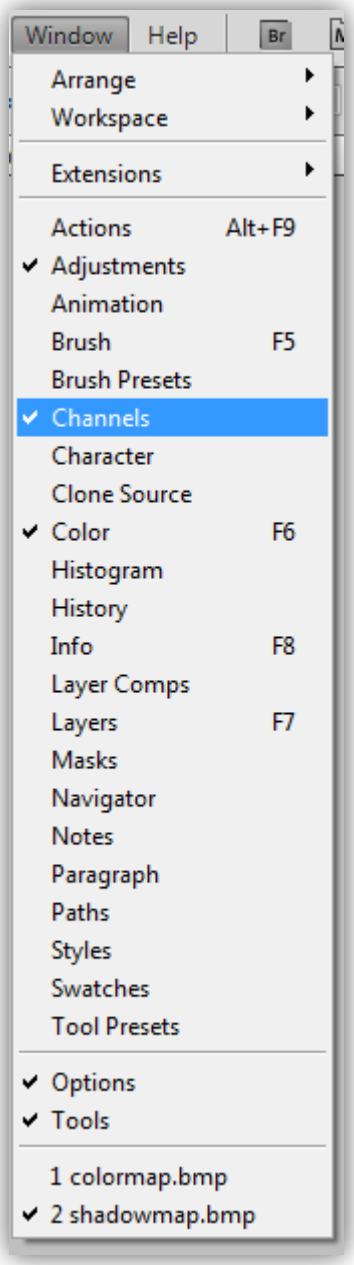


Save it as **DXT1 | 1 bit alpha** and **No MIP maps**

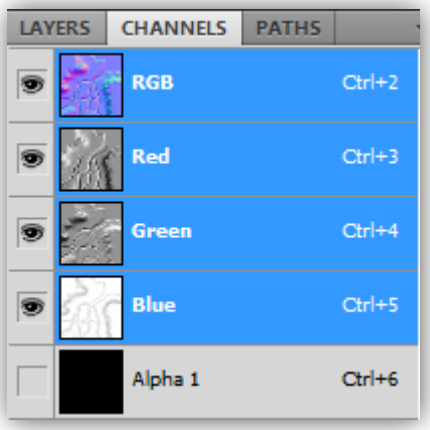


Shadowmap

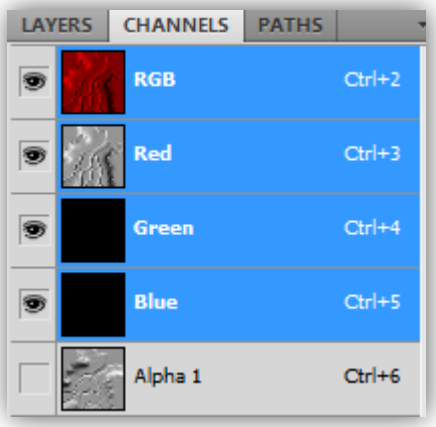
The shadowmap is one of the reasons why it's difficult to edit the files in gimp or paint.net



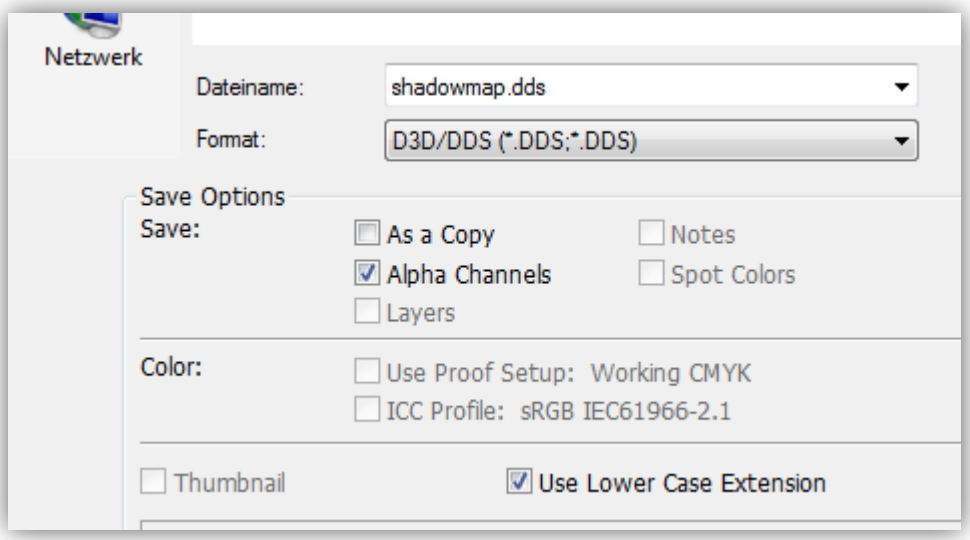
Load the image and activate "channels"



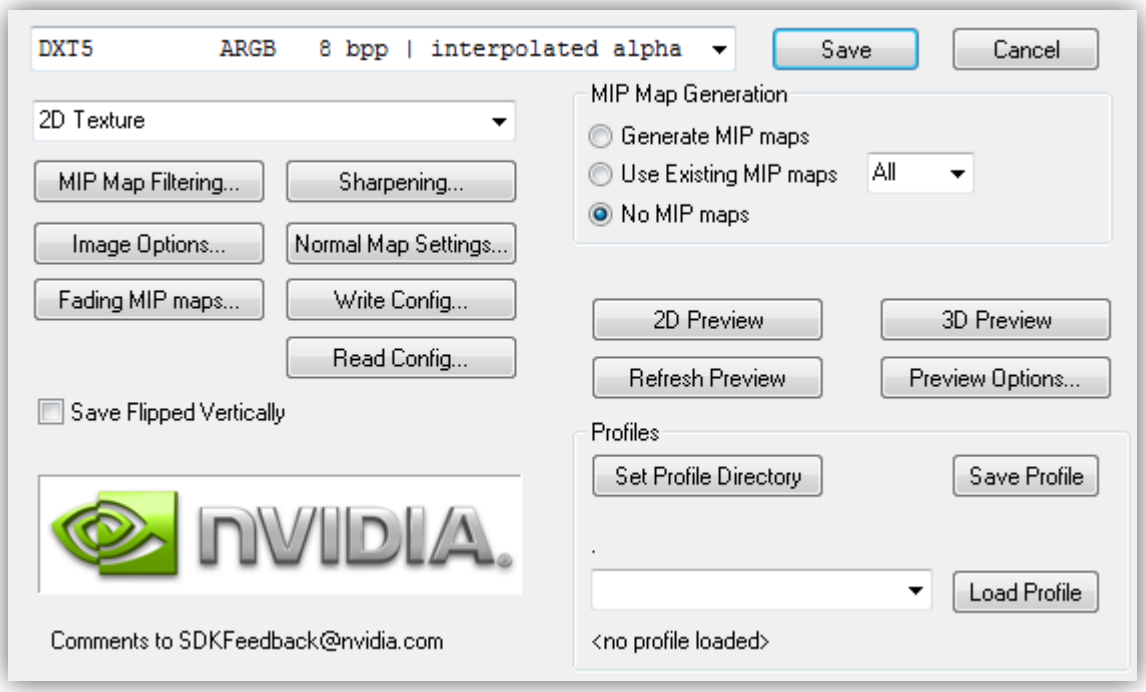
Now select only the green channel and copy it to the Alpha 1. Afterwards select the green and the blue channel and overdraw them with black.



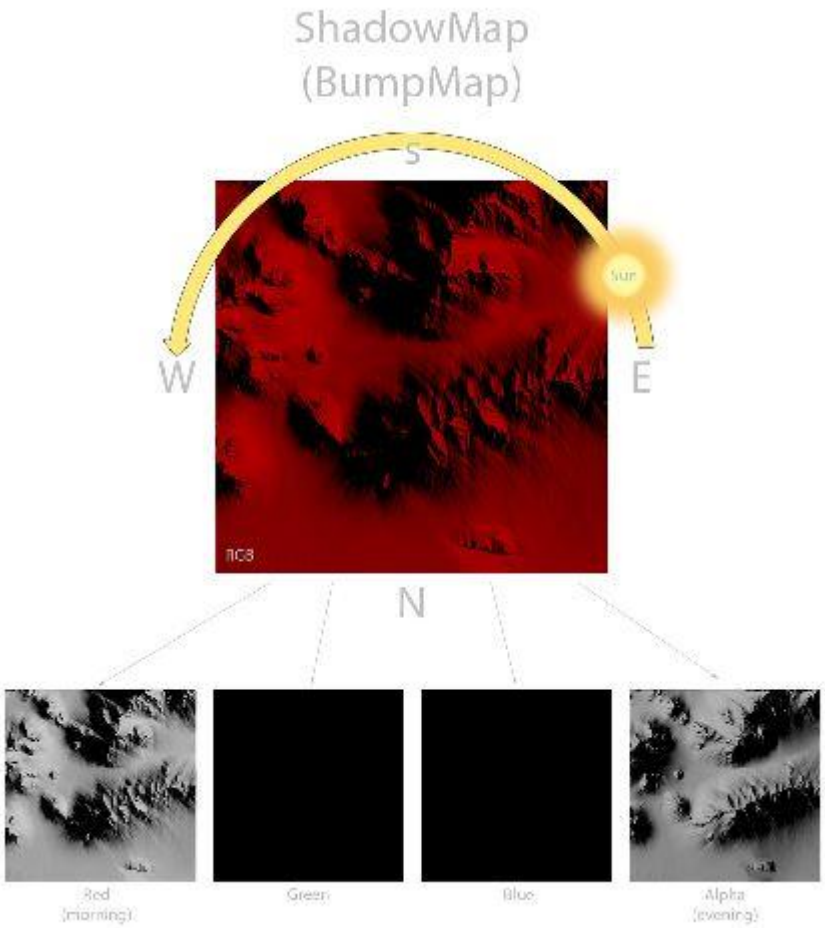
Save it as .dds with the name “shadowmap” and with alpha channels.



Save it as **DXT5 | interpolated alpha** and **No MIP maps**

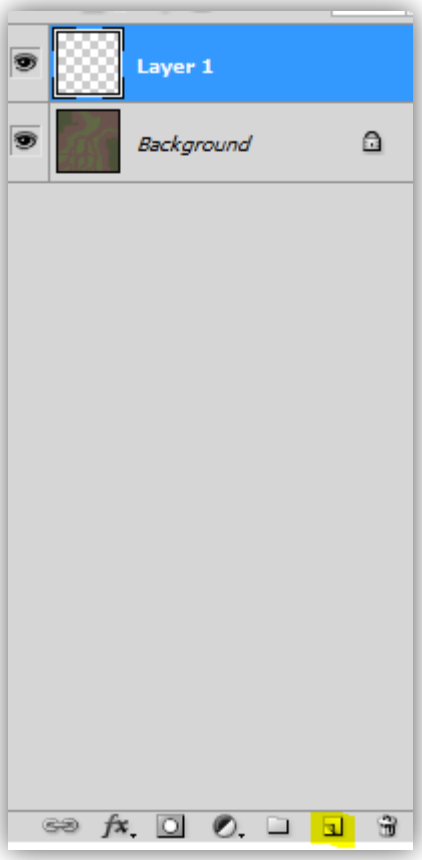


If you are a bit confused of the shadowmap, take a look on this pic:

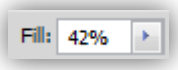


Ressources

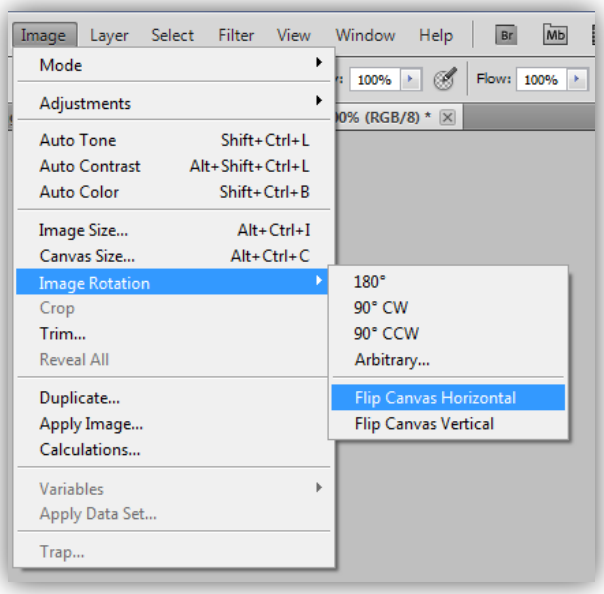
Open the colormap again and create a new layer



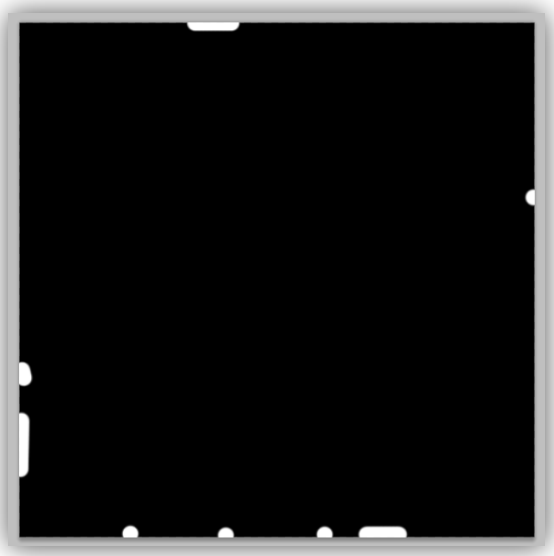
Fill the new layer black and turn down the fill



You have to flip canvas horizontal all ressources maps



Here is an example for a roadlink map:

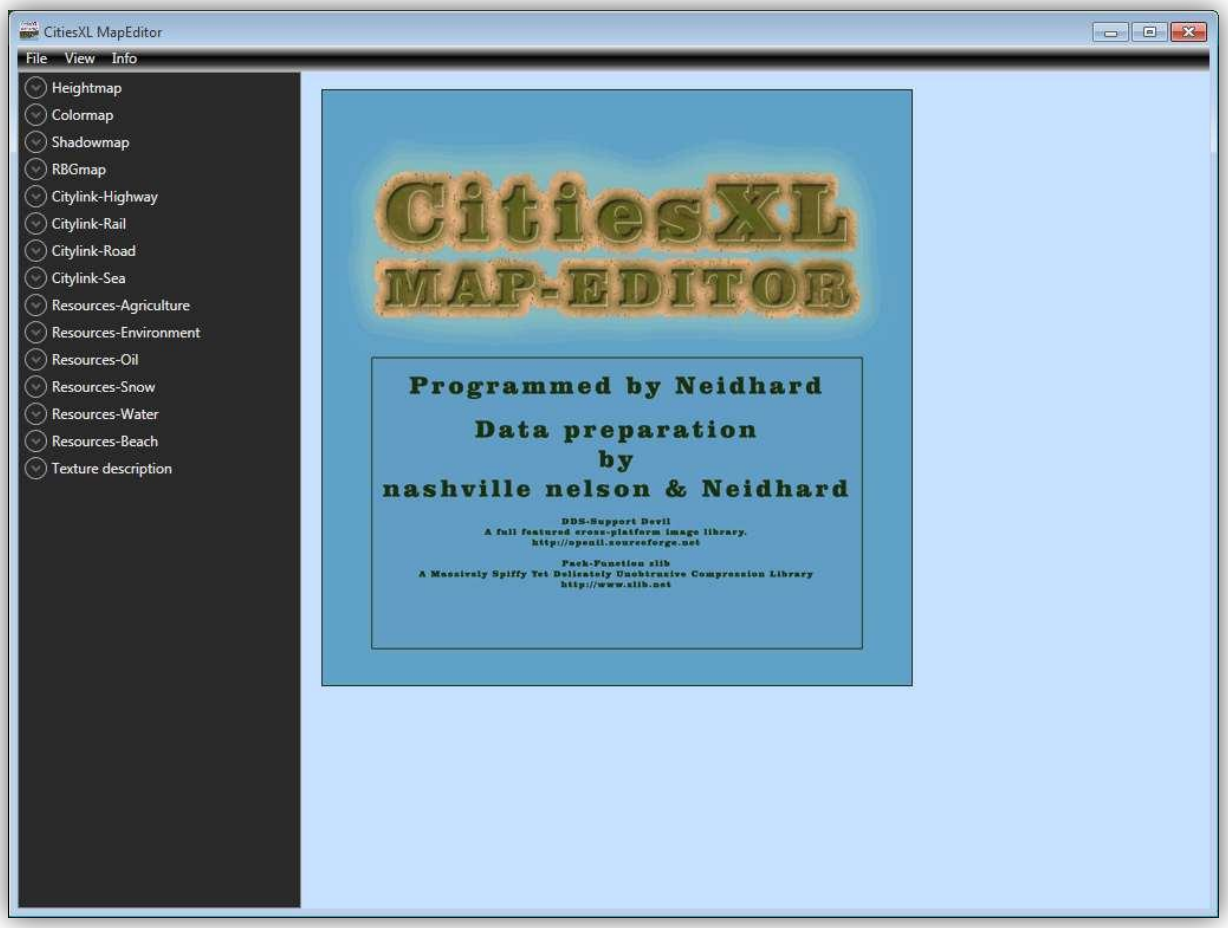


100 % Fill and Save it via FILE – SAVE FOR WEB & DEVICES – SAVE

Map Editor

Importing

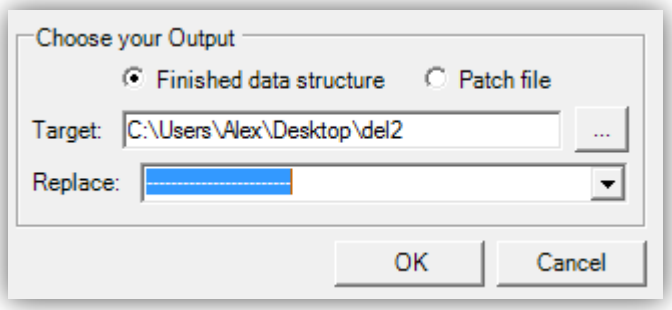
Now you have to open the map editor.



Click the arrow and import the all the files. The RGB Map you can get here.

Exporting

Save the map project and export the map if you finished importing.
Select the path and do not press ok.



Now it's getting a bit complicating

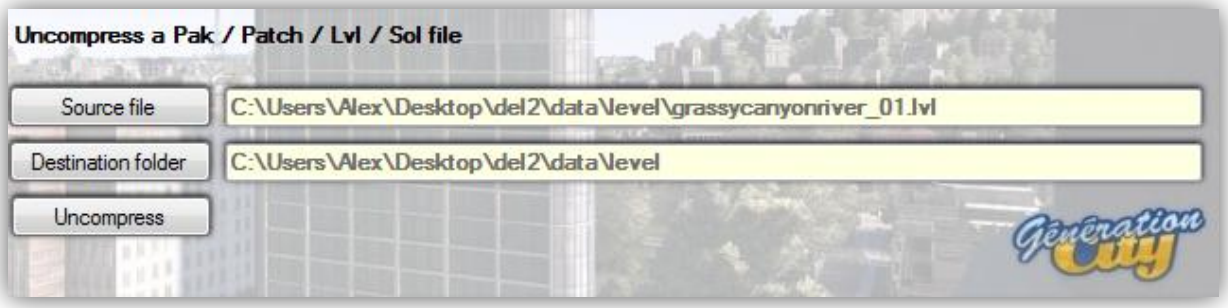
You need your whole CXL unpacked, use the unpacker for this (if you haven't done it before)

Go to the path:
data\level

… and select one .lvl you think that would fit to your map (water level, terrain texture and trees). If you don't know which .lvl file it is ingame go to:
data\interface\ddstexture\maps

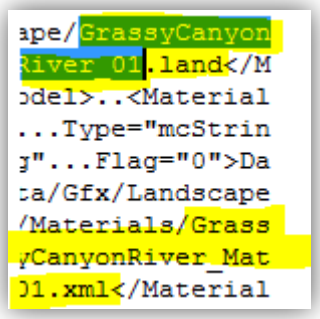
… copy the .lvl file to your folder you made for the new map with the same path:
data\level

Uncompress the copied .lvl file via using the Cities XL Pak/Unpak program from generation-city.



Open the gamedata file you got now with the HxD tool and search for the lvl name

Example:
I took "GrassyCanyonRiver_01"
… and searched for "grassy"



These are the only two results you need. Replace them with your map name, but with **exactly the same length of letters!**

Afterwards save it and open the Cities XL Pak/Unpak program again.

Click on TOOLS – CREATE A LVL FILE

…take exactly the same name like in the gamedata file for the filename of the new .lvl.

Example:
DeltaDeltaDeltaDe_01

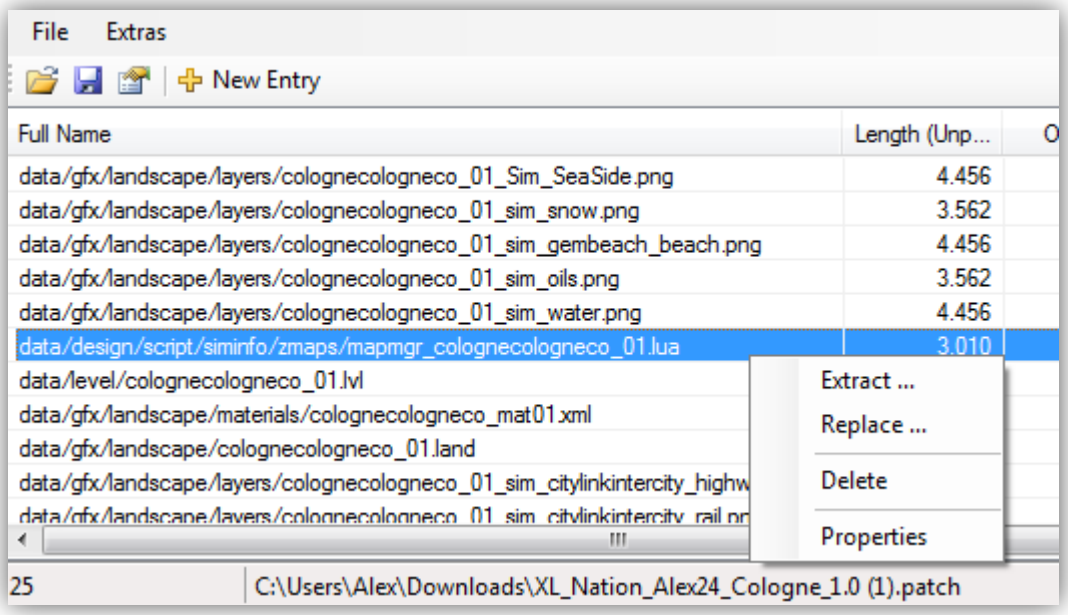
… click on create

Open the map editor again and fill in the space at “Replace” with the level name and create it.

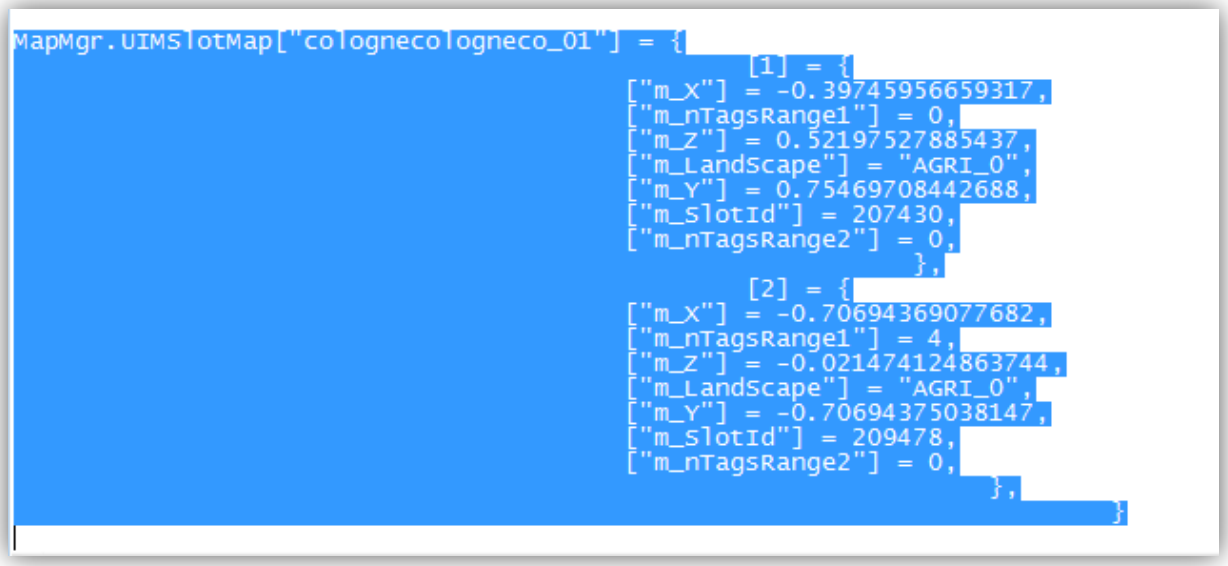
That was a part of the UIM implementation

Finishing the UIM implementation

Open the Cologne map with the okeanos packager and extract mapmgr_colognecologneco_01.lua to exactly the same path in your map folder.



open the .lua with the editor and replace everything with your map and delete this:



As you might have mentioned, there are some new maps like: ["Sim_Fishing"],...
... you can make them manually.

--["Sim_Oils"], "--" means that it is deactivated.

Afterwards you have to copy and rename the original material file for the map. Go to:
data\gfx\landscape\materials

…and copy the material file to your folder and rename it.

If you want you can add a preview image too.
data\interface\ddstexture\maps

And the translations
*data\localization*language**

Now open the packager and create a .patch

… click on “new entry” and select all the files in your map folder.

Your map should be finished, if you have some further questions contact me on XLnation.com