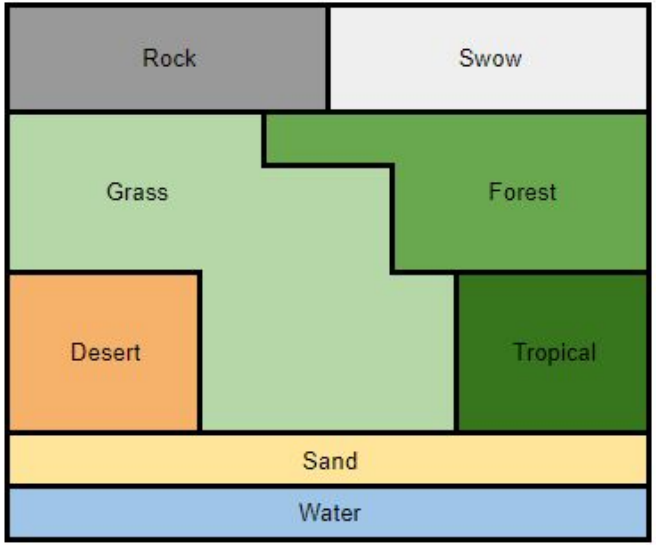
Biome & Vegetation PCG

Nicolas Calvet

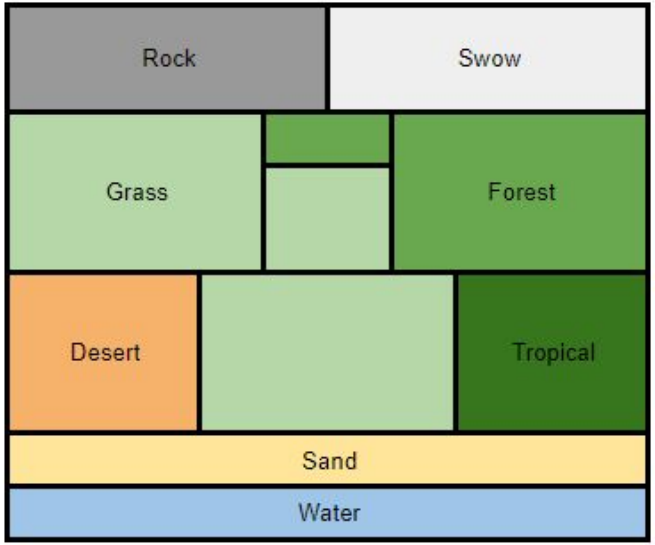
A. Définir les biomes

Selon 2 axes : hauteur et humidité

8 biomes



11 régions



A. Définir les biomes

```
Water {
  H = 0.0;
  M = 0.0;
}
```

```
Beach {
  H = 0.1;
  M = 0.0;
}
```

```
Desert {
  H = 0.2;
  M = 0.0;
}
```

```
Grass {
  H = 0.2;
  M = 0.3;
}
```

```
Tropical {
  H = 0.2;
  M = 0.7;
}
```

```
Grass {
  H = 0.5;
  M = 0.0;
}
```

```
Grass {
  H = 0.5;
  M = 0.4;
} //useless
```

```
Forest {
  H = 0.5;
  M = 0.6;
} //useless
```

```
Forest {
  H = 0.6;
  M = 0.4;
} //useless
```

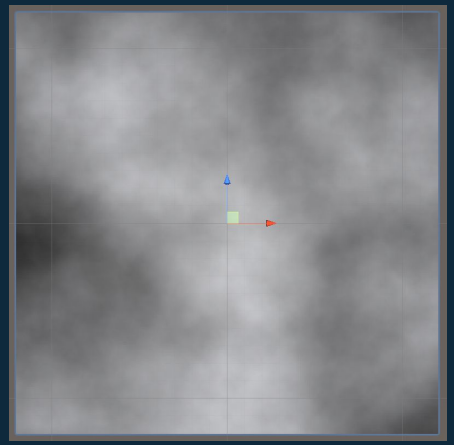
```
Rock {
  H = 0.8;
  M = 0.0;
} //useless
```

```
Snow {
  H = 0.8;
  M = 0.5;
} //useless
```

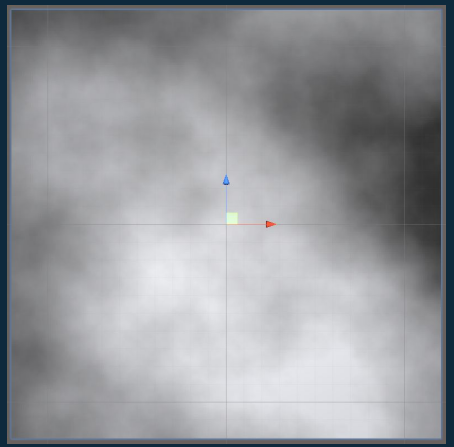
B. Générer le terrain

Avec le bruit de Perlin.

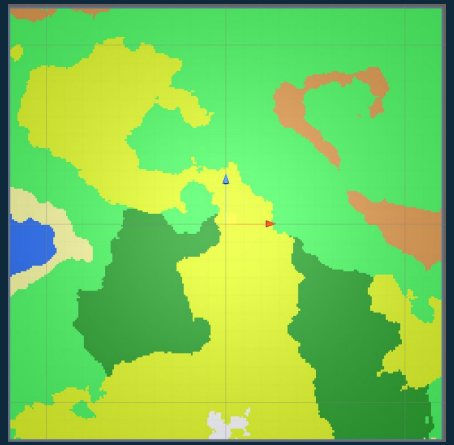
Height Map



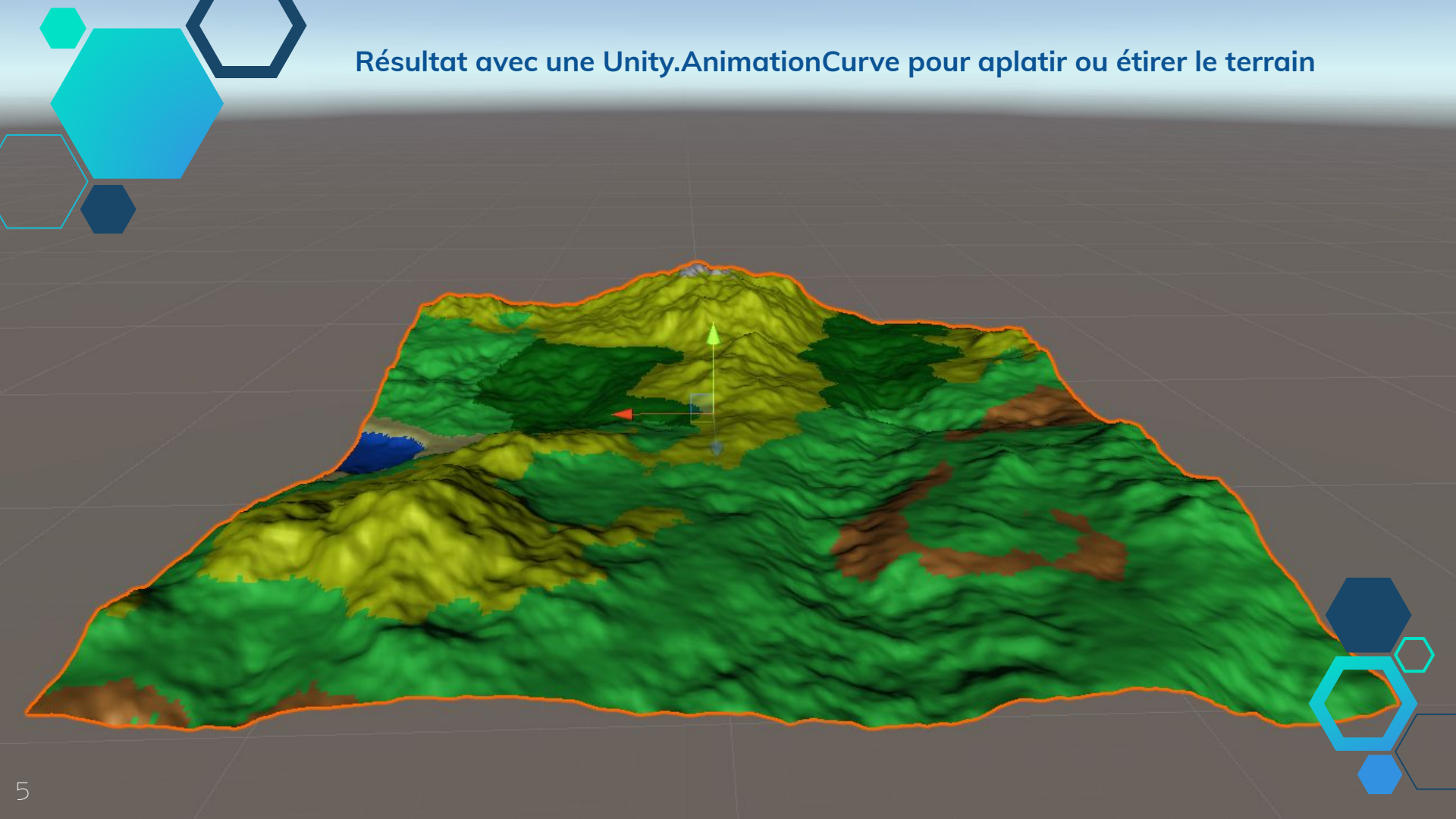
Moisture Map



Color Texture



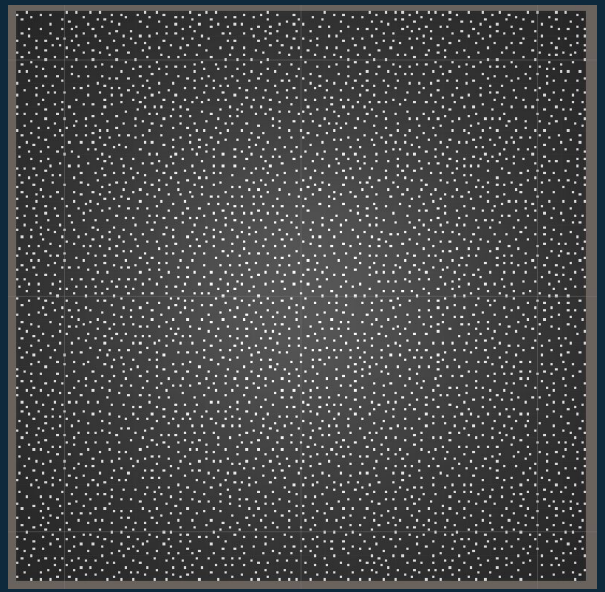
Résultat avec une Unity.AnimationCurve pour aplatir ou étirer le terrain



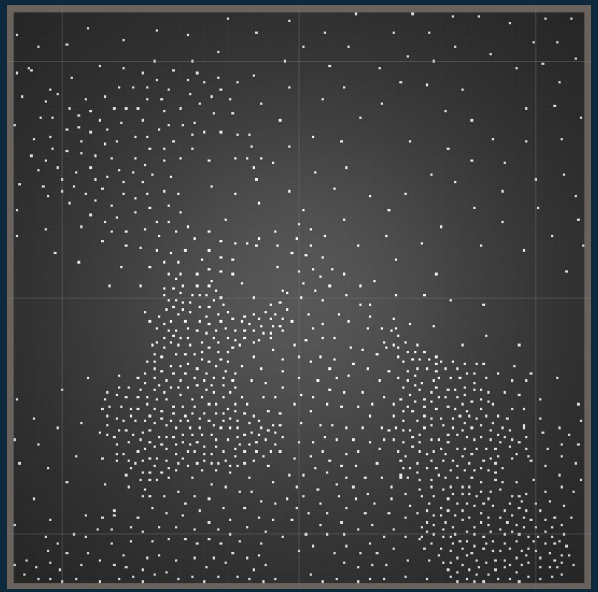
C. Echantillonner

Poisson Disk Sampling

Single biome



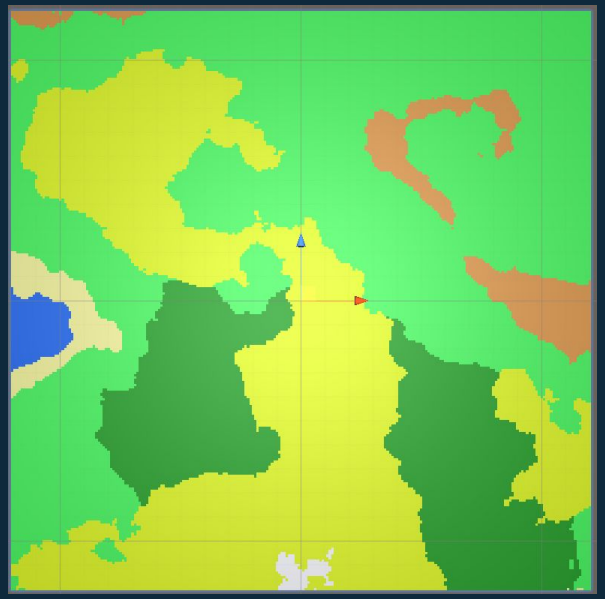
Every biome



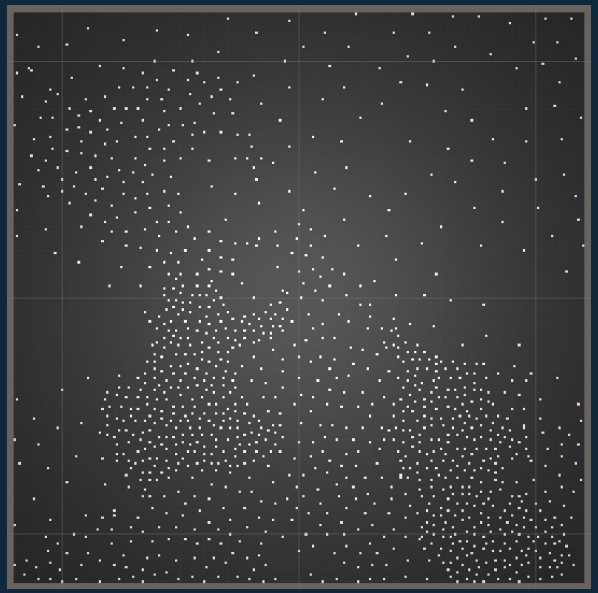
C. Echantillonner

Poisson Disk Sampling

Color texture



Every biome



C. Echantillonner

Poisson Disk Sampling

Pour chaque biome :

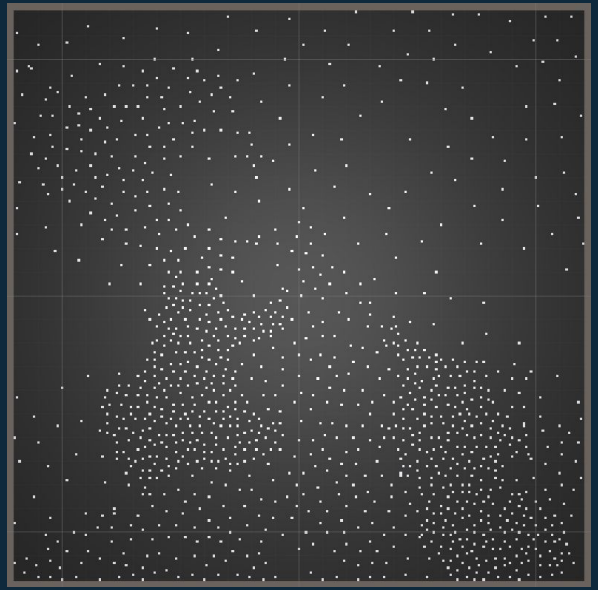
Générer un échantillonnage

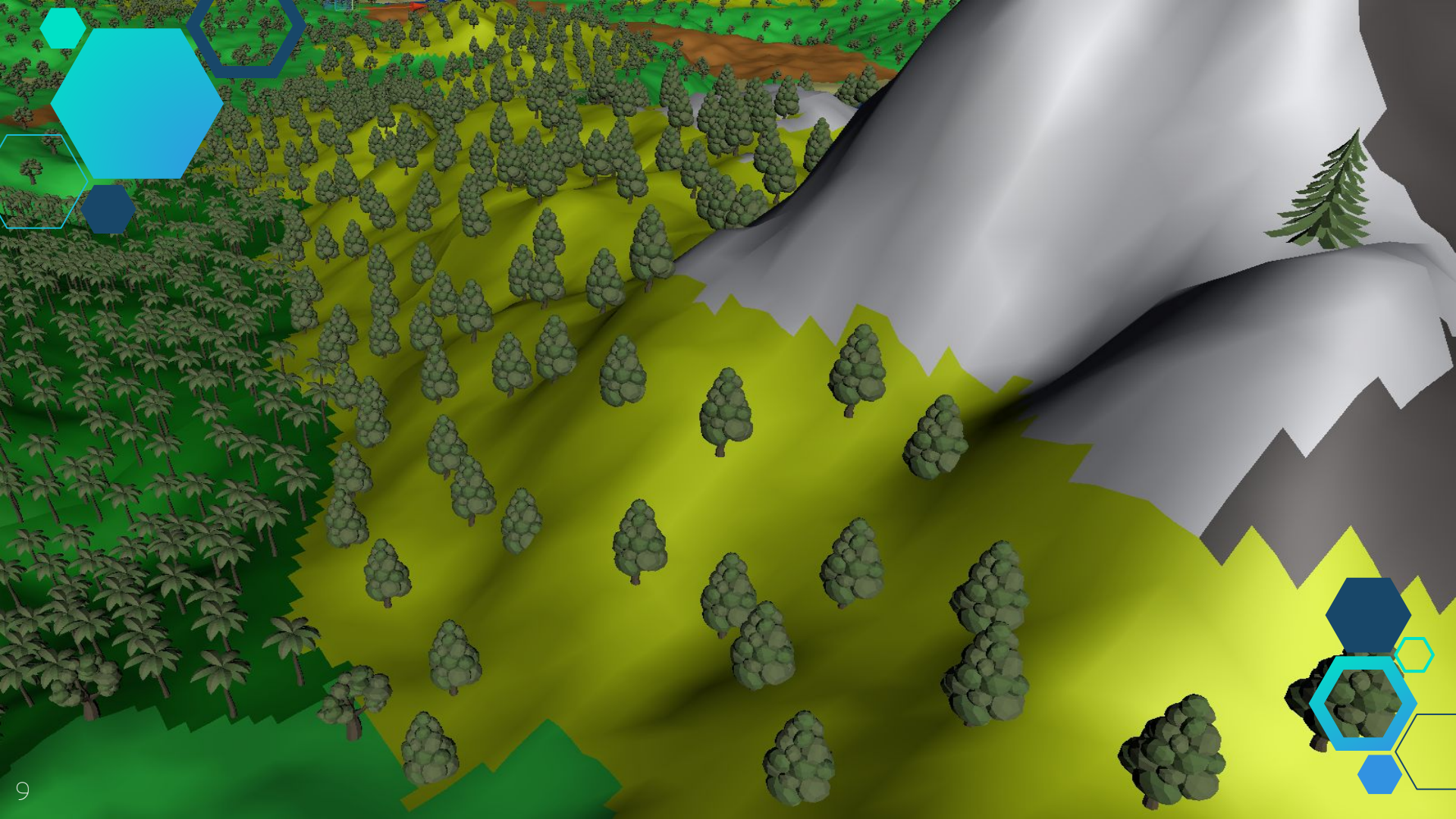
Ne garder que les points placés sur biome correspondent

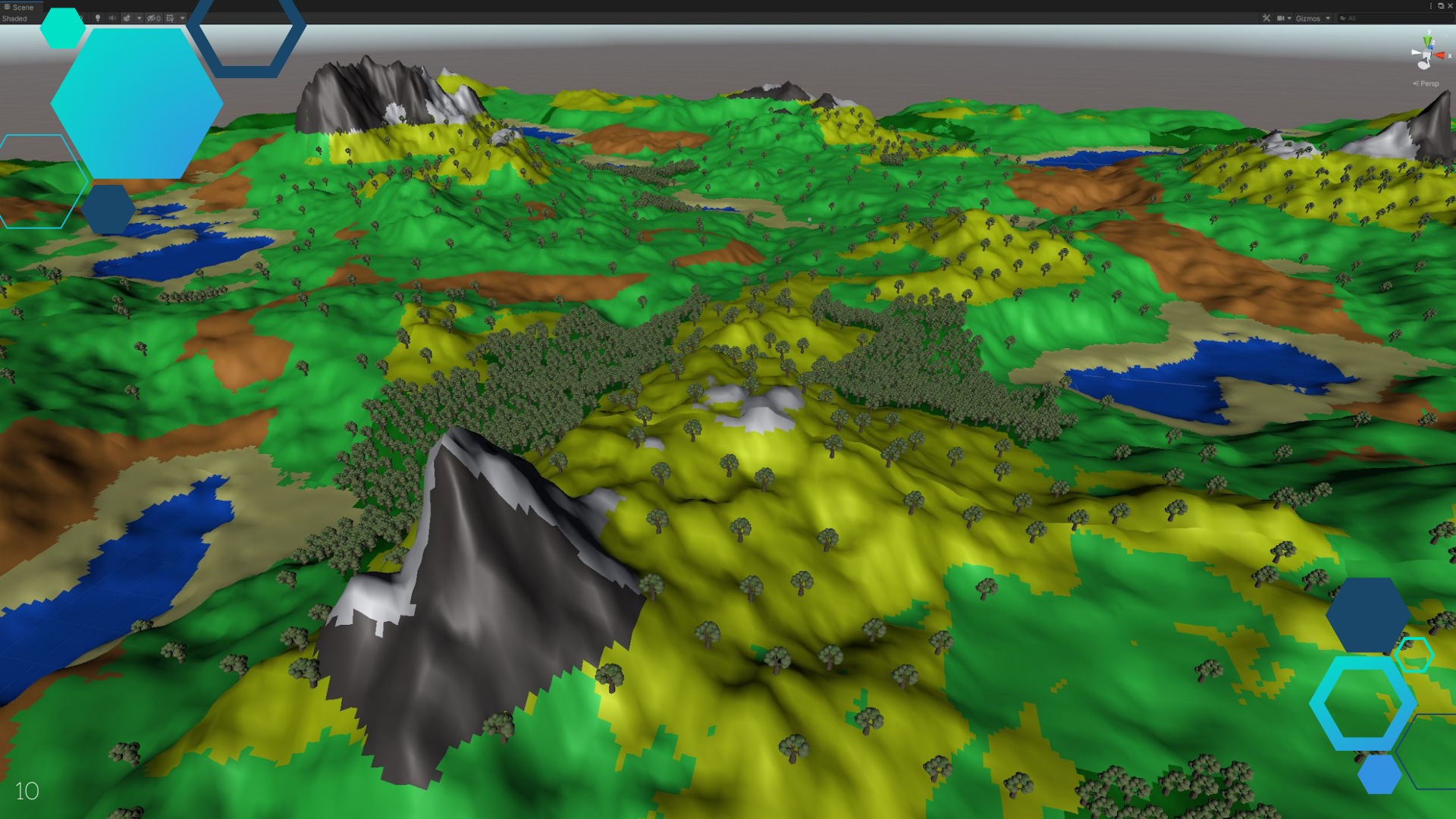
Problèmes :

- **Liaisons inter-biomes**
- **Liaisons inter-chunks**

Every biome





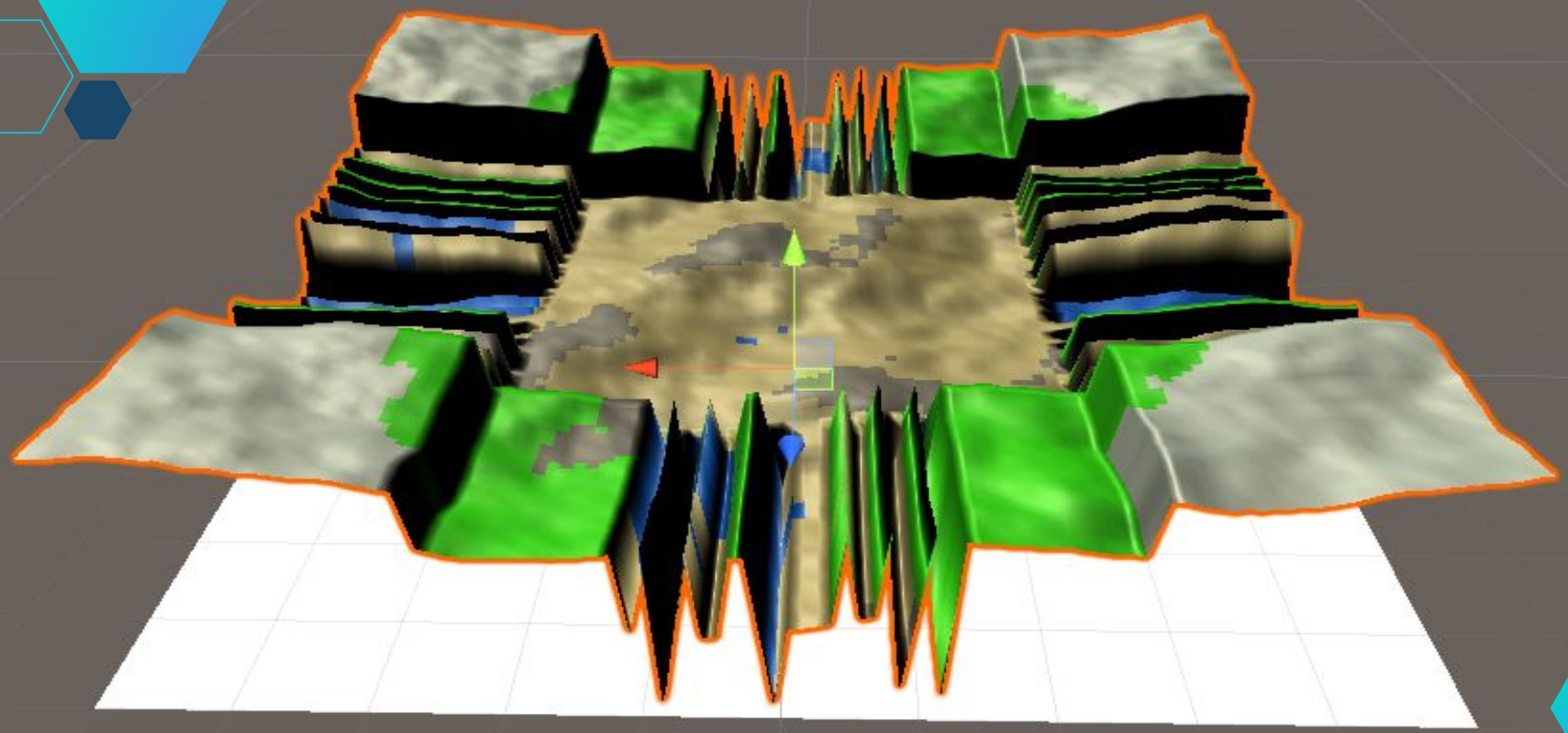

Scene
Shaded
Gizmos
Persp

Merci !

Des questions ?

You can find me at:

- https://github.com/NicolasCalvet/Biome-and-Vegetation-Procedural-Generation



Credits

Special thanks to all the people who made and released these awesome resources for free:

- Presentation template by SlidesCarnival
- Photographs by Unsplash