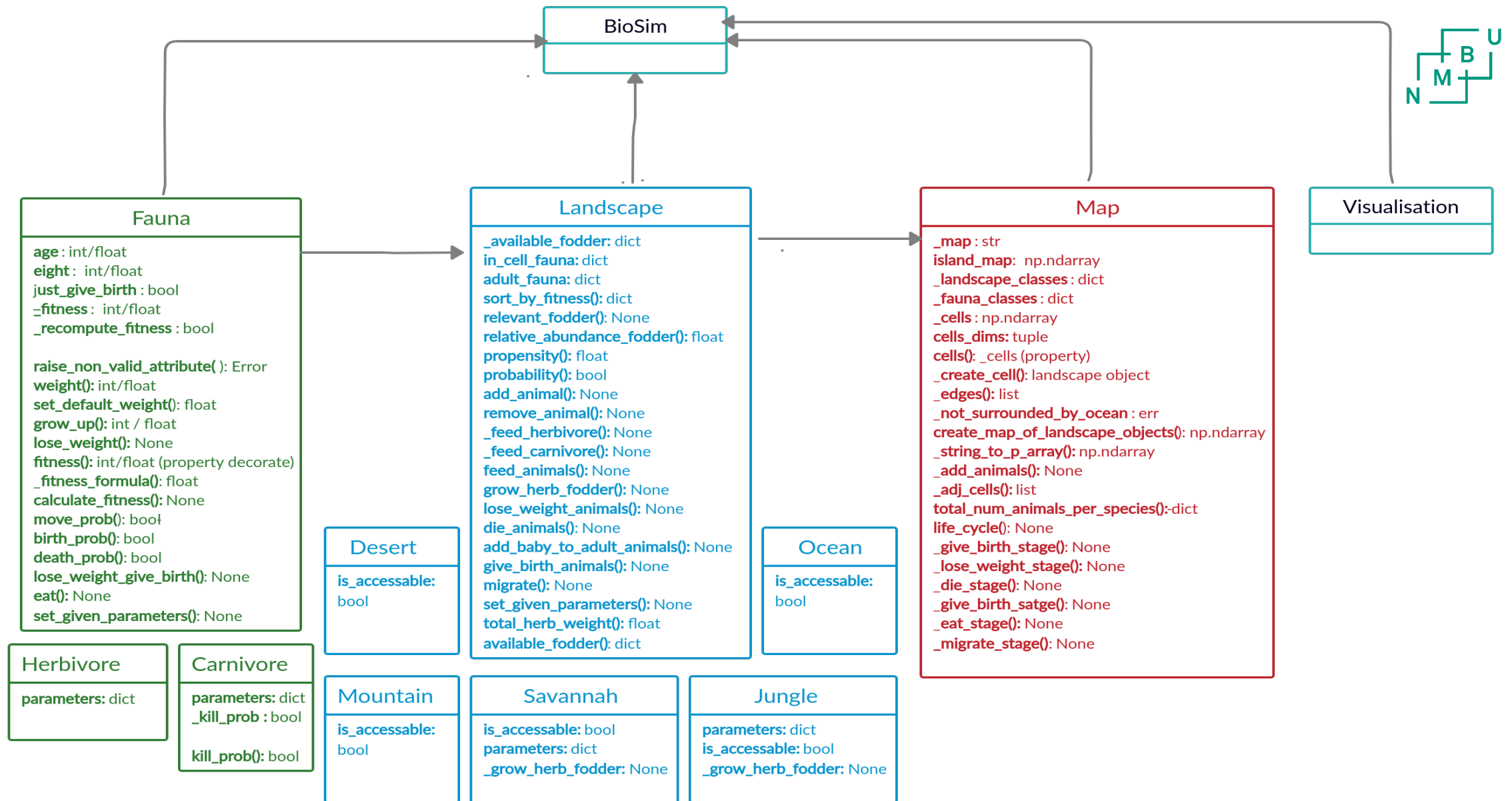


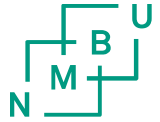
Norwegian University
of Life Sciences

Modelling of Ecosystem of Rossumøya

Mohamed Radwan, Nasibeh Mohammadi

Group 26





Github Issues

<input type="checkbox"/>	7 Open	✓ 37 Closed
<input type="checkbox"/>	! fix latex issue in documentation	#45 opened 15 days ago by mhmdrdwn
<input type="checkbox"/>	! add equations using latex code	#44 opened 15 days ago by mhmdrdwn
<input type="checkbox"/>	! Gassian ditrsibution tests	#39 opened 17 days ago by mhmdrdwn
<input type="checkbox"/>	! serialization	#24 opened 18 days ago by mhmdrdwn
<input type="checkbox"/>	! GUI	#22 opened 18 days ago by mhmdrdwn
<input type="checkbox"/>	! Parallisation	#21 opened 18 days ago by mhmdrdwn
<input type="checkbox"/>	! Optimisation	#20 opened 18 days ago by mhmdrdwn

<input type="checkbox"/>	! migration	#49 by mhmdrdwn was closed 11 days ago
<input type="checkbox"/>	! initial map class	#47 by nasibehm was closed 14 days ago
<input type="checkbox"/>	! further fauna tests	#42 by mhmdrdwn was closed 9 days ago
<input type="checkbox"/>	! exclusively meaning	#40 by mhmdrdwn was closed 11 days ago
<input type="checkbox"/>	! all landscapes functions tests	#35 by mhmdrdwn was closed 9 days ago
<input type="checkbox"/>	! landscapes common methods tests	#34 by mhmdrdwn was closed 9 days ago
<input type="checkbox"/>	! herbevores methods tests	#33 by mhmdrdwn was closed 9 days ago
<input type="checkbox"/>	! carnivores methods tests	#32 by mhmdrdwn was closed 9 days ago
<input type="checkbox"/>	! animals common methods tests	#31 by mhmdrdwn was closed 9 days ago
<input type="checkbox"/>	! optimal code over enough modules	#30 by mhmdrdwn was closed 1 minute ago
<input type="checkbox"/>	! Modules are ok	#29 by mhmdrdwn was closed 1 minute ago
<input type="checkbox"/>	! parameters	

Extra Work

- DRY (Don't Repeat Yourself) and don't WET (Waste Everyone's Time)
- Modular, Maintainable Code
- Optimization
- Sphinx Docs
- Fixtures, mockers

File	Coverage
biosim	100% files, 90% lines covered
__init__.py	100% lines covered
fauna.py	95% lines covered
landscapes.py	79% lines covered
map.py	100% lines covered
simulation.py	86% lines covered
visualisation.py	95% lines covered

```
@classmethod
def set_given_parameters(cls, given_parameters):
    """
    Sets the user defined parameters that applies to Savannah, Jungle.
    Parameters
    -----
    given_parameters: dict
    """

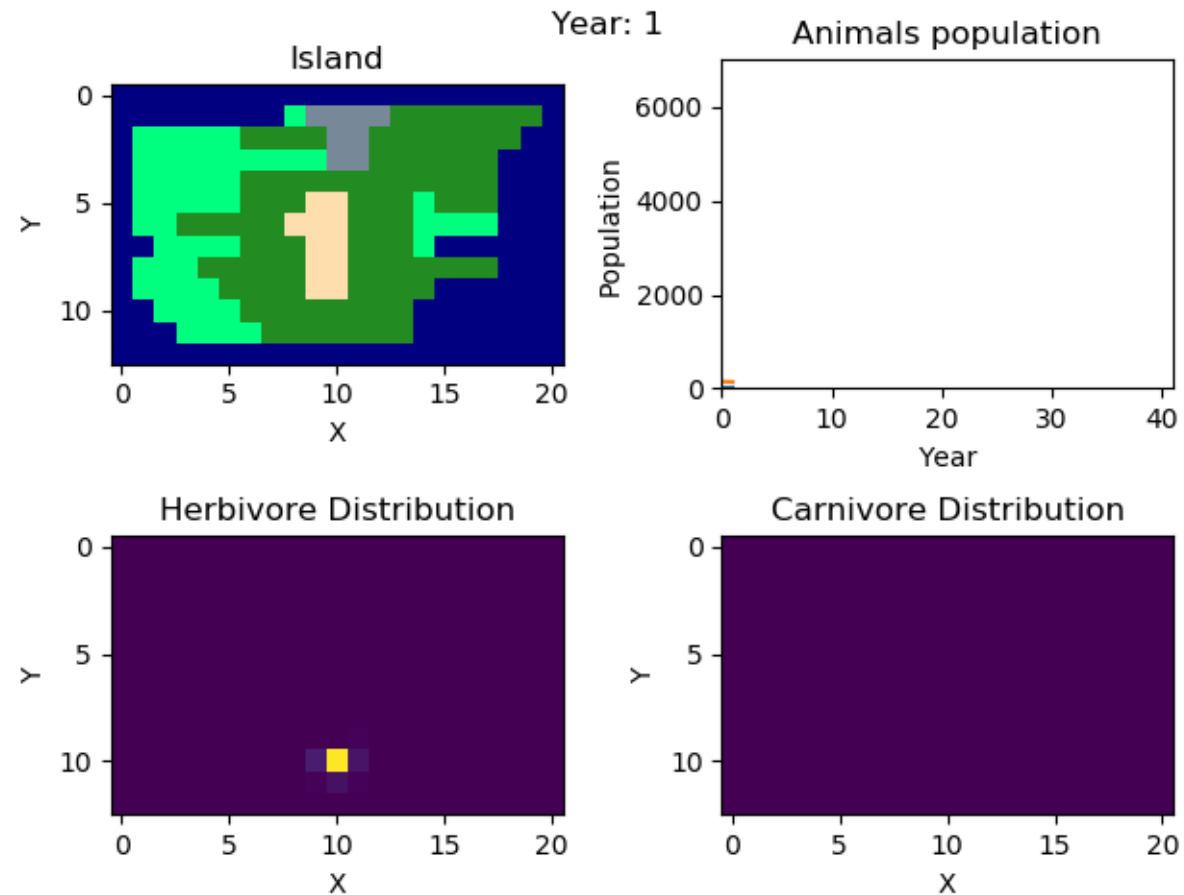
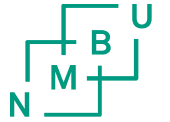
    for parameter in given_parameters:
        if parameter in Savannah.parameters:
            cls.parameters[parameter] = \
                given_parameters[parameter]
        else:
            raise RuntimeError('Unknown parameter, ' +
                               str(parameter) +
                               ' can\'t be set')
```

Challenges/Bugs

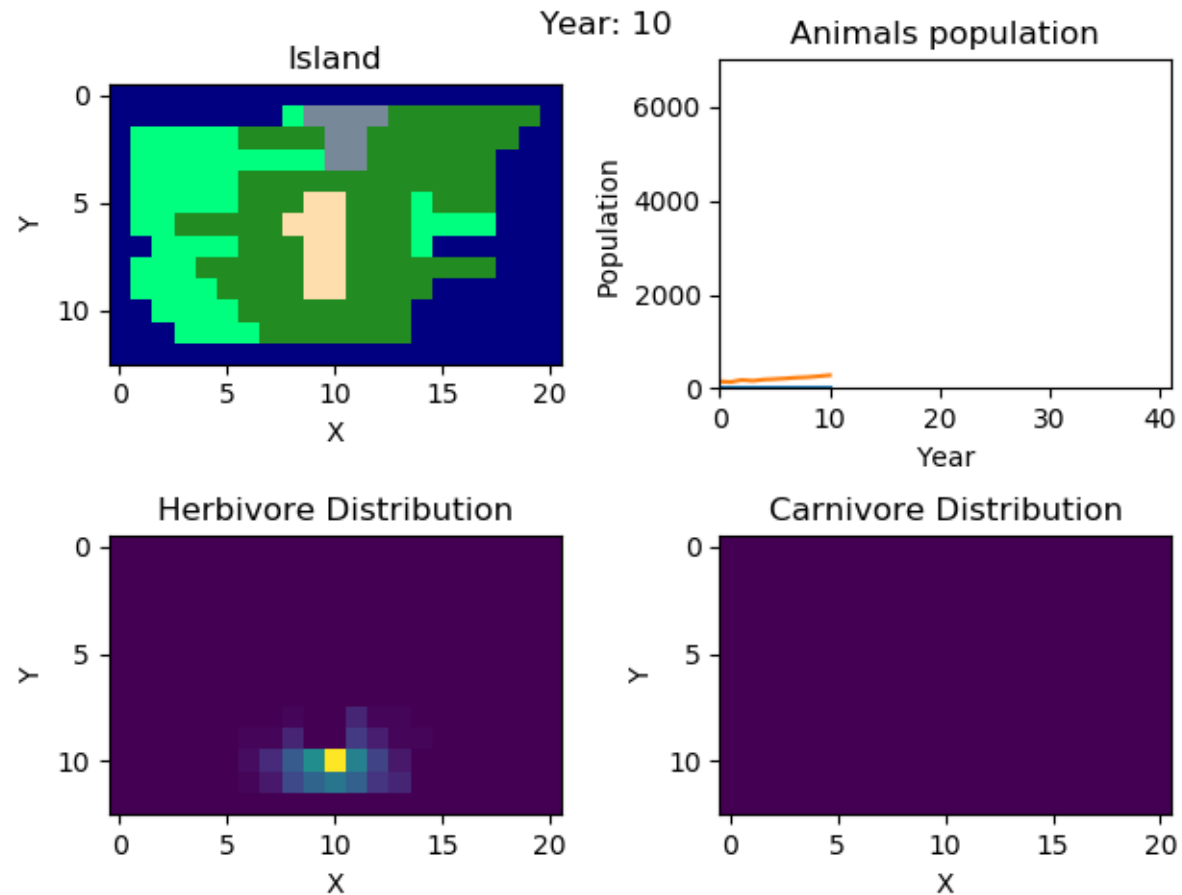
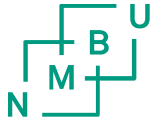
- Simulation results exceed runtime error:
(40000 Herbivore)
 - Random seed
 - Methods/variables resolution orders
 - Random migration
 - Wrong implementation of feeding
- Parallelization

```
{'Carnivore': 6, 'Herbivore': 2697}
Year 56
{'Carnivore': 4, 'Herbivore': 2843}
Year 57
{'Carnivore': 2, 'Herbivore': 3033}
Year 58
{'Carnivore': 1, 'Herbivore': 3192}
Year 59
{'Carnivore': 1, 'Herbivore': 3430}
Year 60
{'Carnivore': 1, 'Herbivore': 3580}
Press ENTER
```

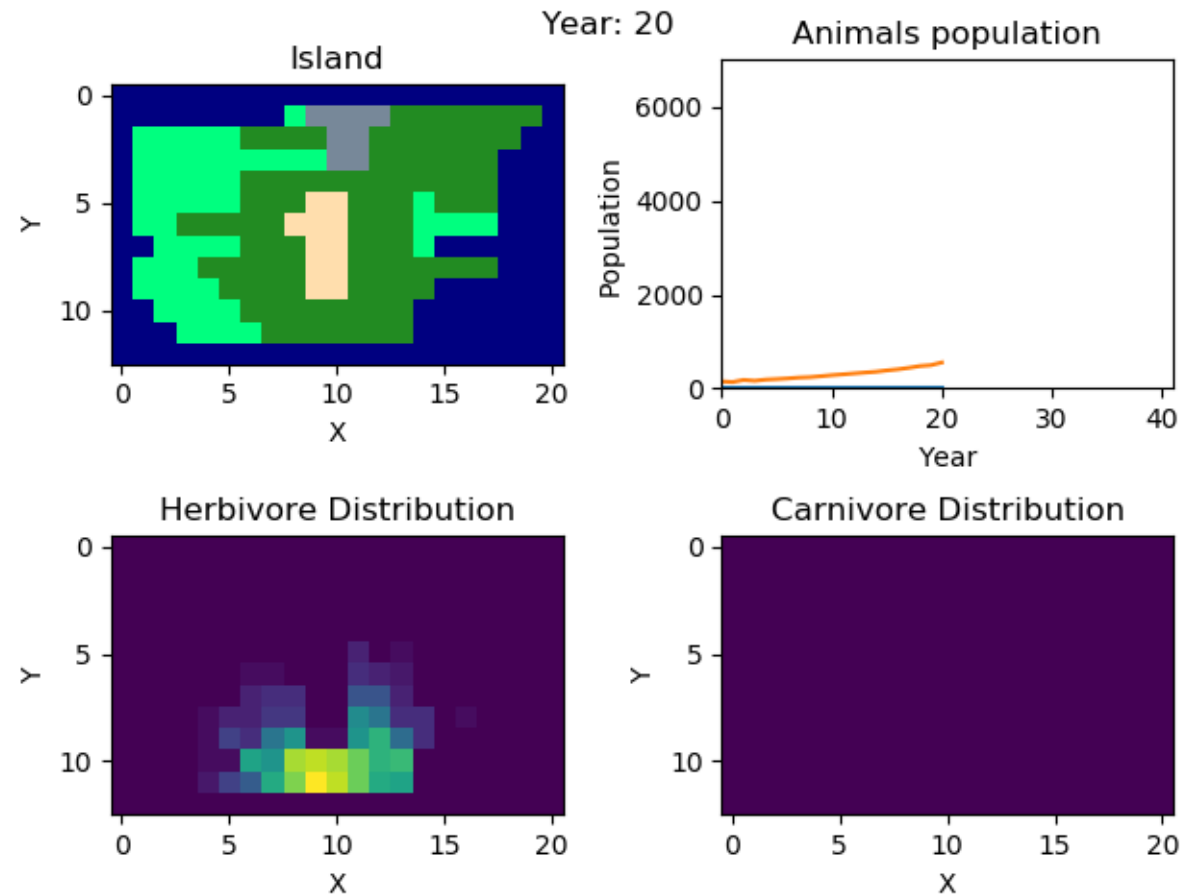
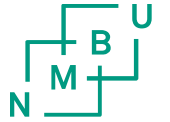
Challenges/Bugs



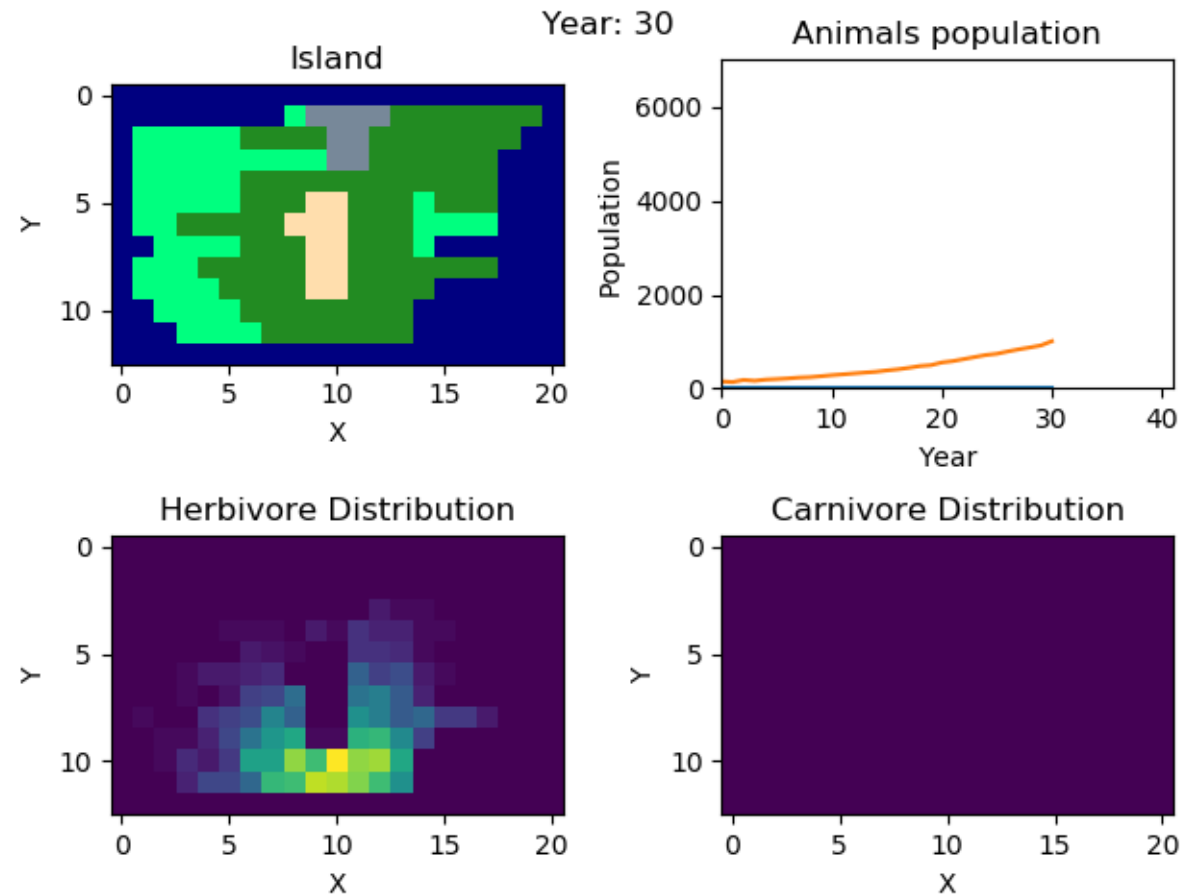
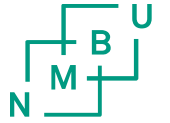
Challenges/Bugs



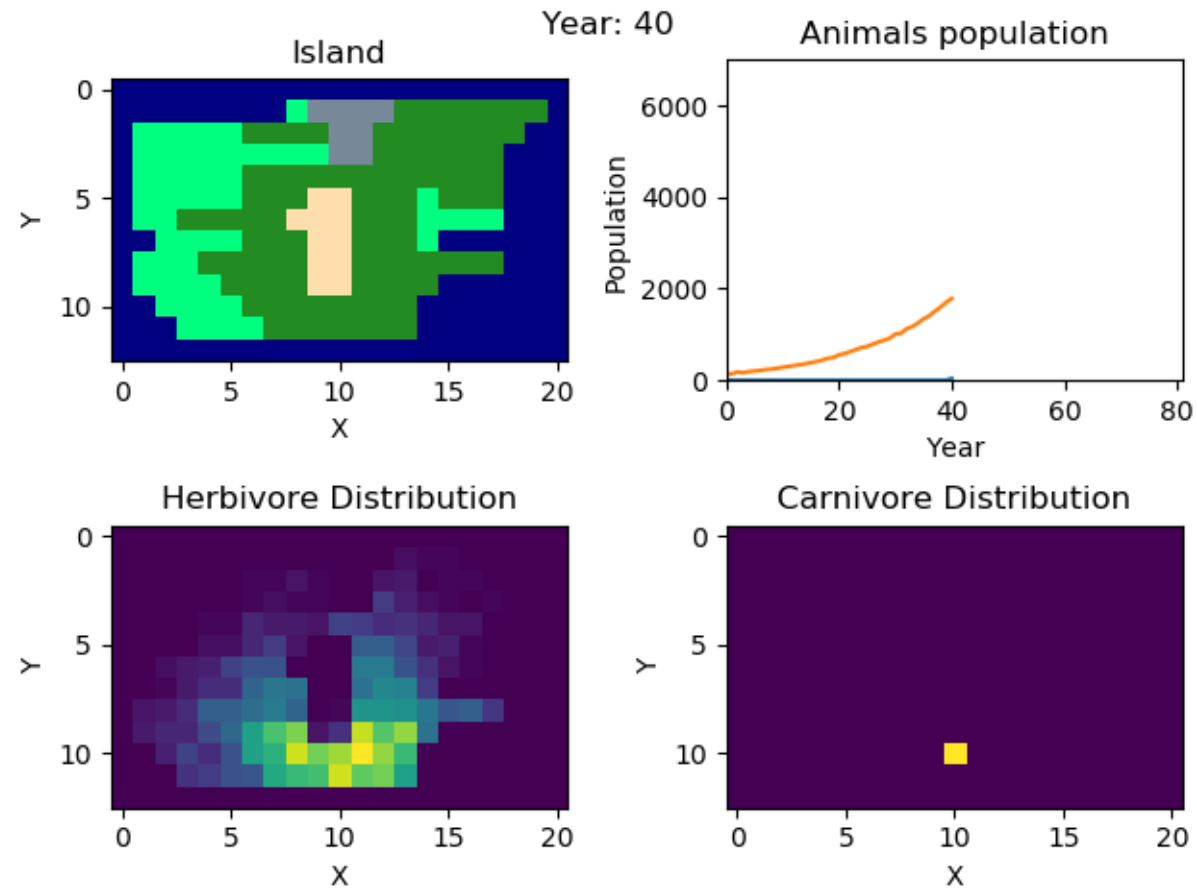
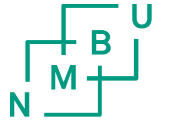
Challenges/Bugs



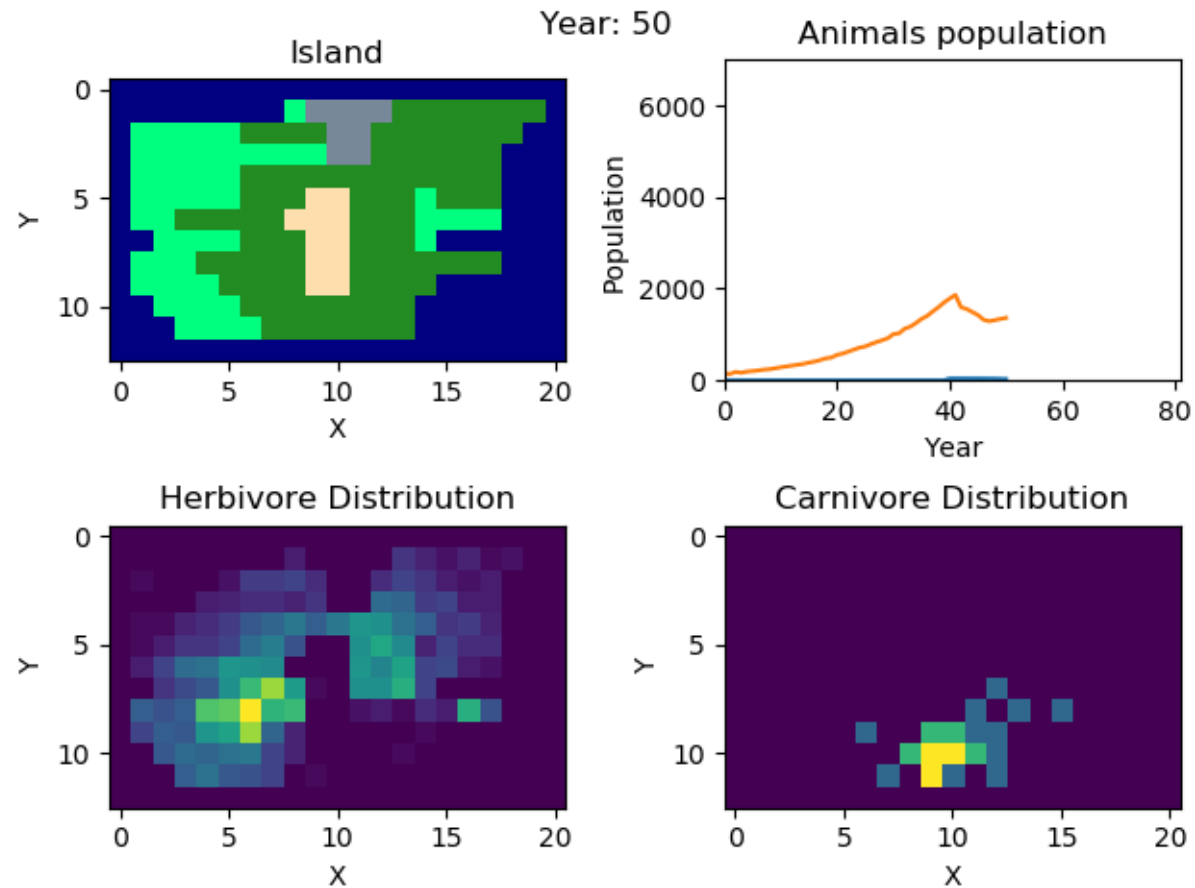
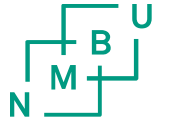
Challenges/Bugs



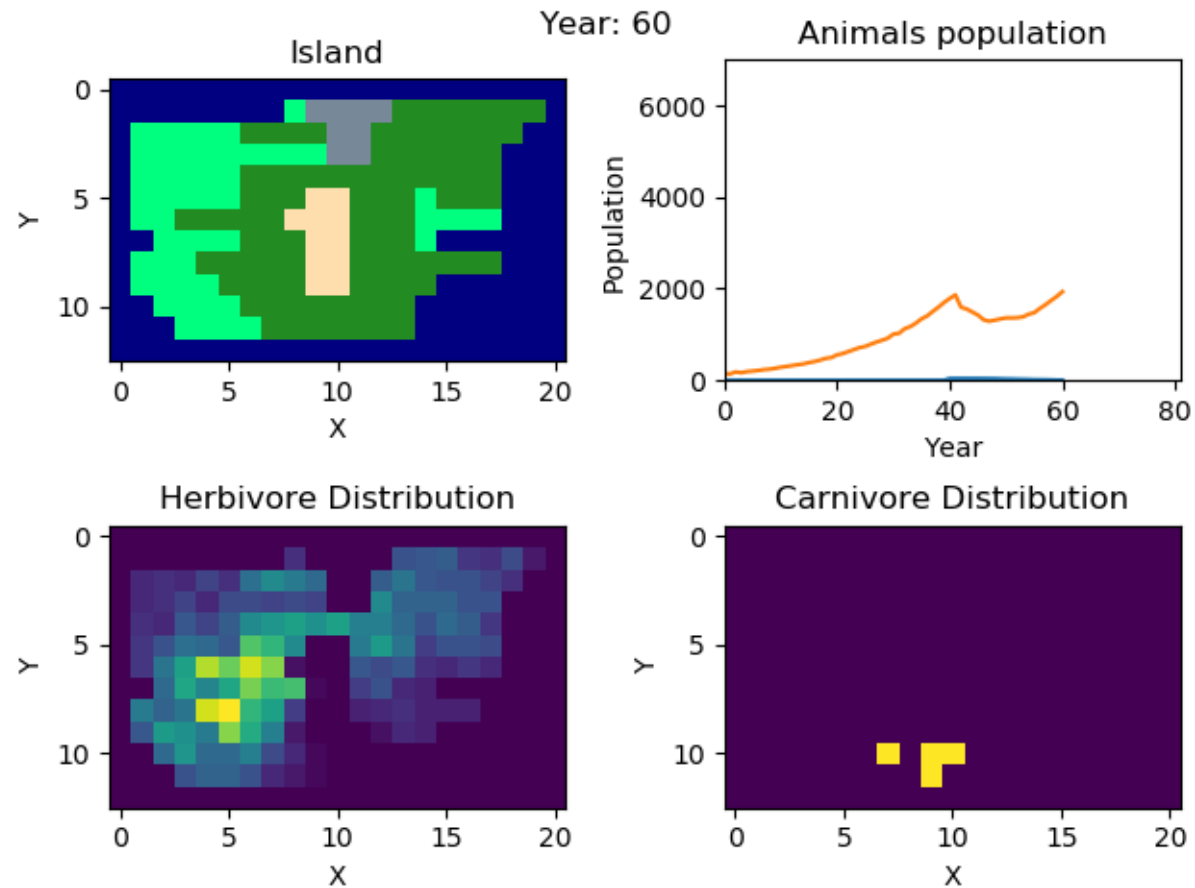
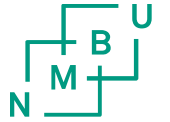
Challenges/Bugs



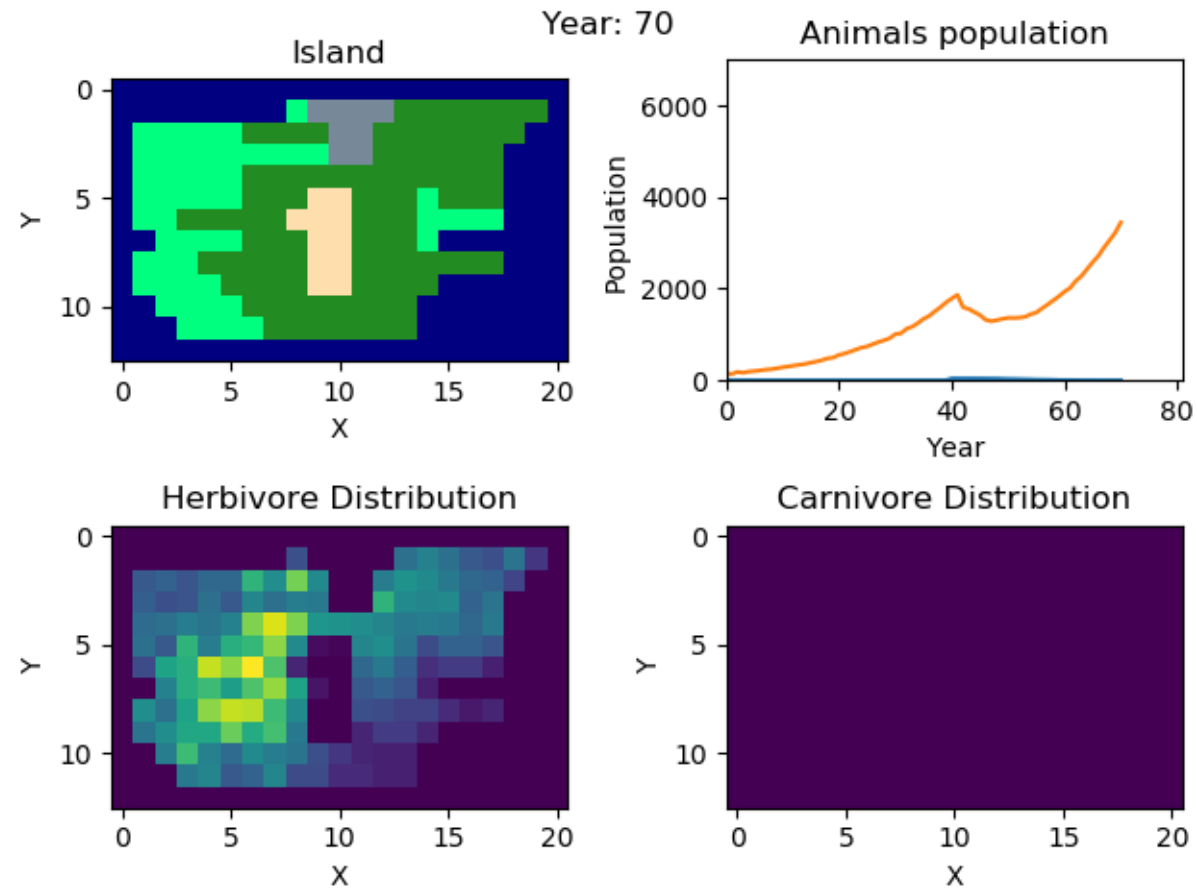
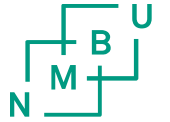
Challenges/Bugs



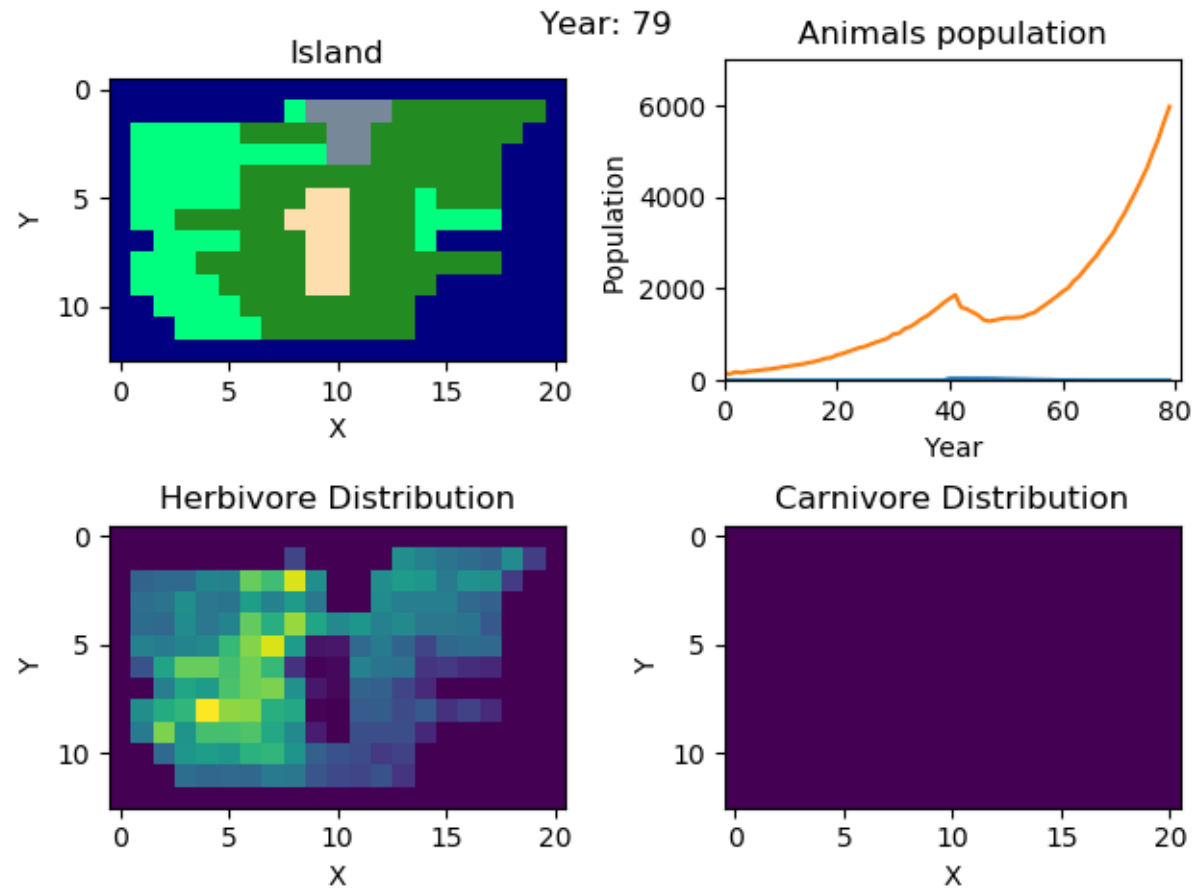
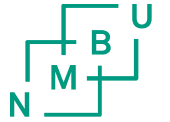
Challenges/Bugs



Challenges/Bugs



Challenges/Bugs



Discussion

