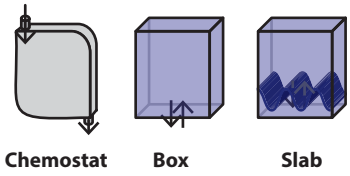
xarray-simlab

```
import xsimlab as xs
```

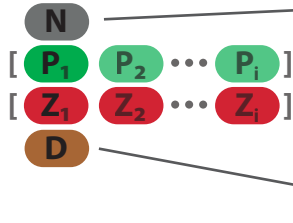
phydra v1

```
import phydra
```

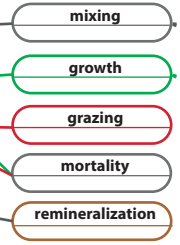
1 Choose physical setting



2 Choose components



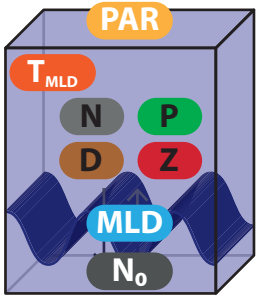
3 Choose fluxes



4 Supply forcing

5 Create xsimlab model instance

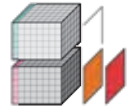
```
slab_npzd = xs.Model({
    'PhysEnv':phydra.env.Slab,
    'N':phydra.comp.Nitrogen,
    ...})
```



slab_npzd
xs.Model

6 Supply parameters & time-steps

```
xr_in = xs.create_setup(
    model=slab_npzd,
    clocks={'time':[...]}
    input_vars={...},
    output_vars={...}
    )
```



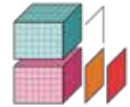
ds_in
xarray.Dataset

7 Run model

```
ds_out = ds_in.xsimlab.run(
    model = slab_npzd,
    parallel=True,
    ...)
```

DASK

Zarr



ds_out
xarray.Dataset

8 Analyse & visualise output

```
ds_out.P__state.plot(
    x='time')
```

matplotlib