Optimisation work for GENIE `cupcake`

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1 Shared

1.1 Tracer counts

Tracer counts are defined in `common/gem_cmn.f90` as `PARAMETER`s:

```
INTEGER,PARAMETER::n_atm = 19
INTEGER,PARAMETER::n_ocn = 95
INTEGER,PARAMETER::n_sed = 79
```

and also in `wrappers/genie_control.f90`:

```
INTEGER, PARAMETER :: intrac_atm_max=19, intrac_ocn_max=95, intrac_sed_max=79
```

Instead, these *maximum* tracer counts should be kept as `PARAMETER`s while the *actual* tracer counts are determined from the `atm_select`, `ocn_select` and `sed_select` arrays:

```
INTEGER, PARAMETER :: &
  & n_atm_max = 19, n_ocn_max = 95, n_sed_max = 79

...

n_atm = COUNT(atm_select)
n_ocn = COUNT(ocn_select)
n_sed = COUNT(sed_select)
```

and index mapping arrays should be defined as:

```
INTEGER, DIMENSION(:), ALLOCATABLE :: &
  & idx_to_atm, idx_to_ocn, idx_to_sed
INTEGER, DIMENSION(n_atm_max) :: atm_to_idx
INTEGER, DIMENSION(n_ocn_max) :: ocn_to_idx
INTEGER, DIMENSION(n_sed_max) :: sed_to_idx
```

one set giving the mapping from the index into tracer arrays to the tracer ID (all the existing `io_...` constants) and the other giving the mapping from the tracer ID to the index into tracer arrays (with a default value of -1 for unused tracers). These things should all be set up immediately after the main GENIE namelist is read so that all of the array sizes are assigned before any of the sub-modules are initialised.

Some of this sort of thing has already been partially done in `common/gem_util.f90` and `common/gem_cmn.f90`. That stuff should be cleaned up and used for this. There should be one common set of tracer index maps for each tracer type (atmosphere, ocean, sediment) across all modules.

Might it be a good idea to actually make the `io_...` constants non-constant and assign the index values to them directly? Depends on how these things are used elsewhere.

2 gemlite

2.1 Source files

```
 15  end_gemlite.f90
 89  gemlite_data.f90
 95  gemlite_lib.f90
113  cpl_comp_gemlite.f90
113  initialise_gemlite.f90
541  gemlite.f90
```

2.2 Coordinate variables

These need to be redefined *not* to be PARAMETERs:

```
INTEGER,PARAMETER::n_i = ilon1_ocn
INTEGER,PARAMETER::n_j = ilat1_ocn
INTEGER,PARAMETER::n_k = inl1_ocn
```

2.3 Array definitions

Most are already ALLOCATABLE, except for:

```
INTEGER,DIMENSION(n_i,n_j)::goldstein_k1
REAL,DIMENSION(n_k)::goldstein_dz
REAL,DIMENSION(n_k)::goldstein_dza
REAL,DIMENSION(0:n_j)::goldstein_sv
```

2.4 Allocation and deallocation

2.5 Special considerations

Tracer counts! (Probably like more or less all the other biogeochemistry modules.)