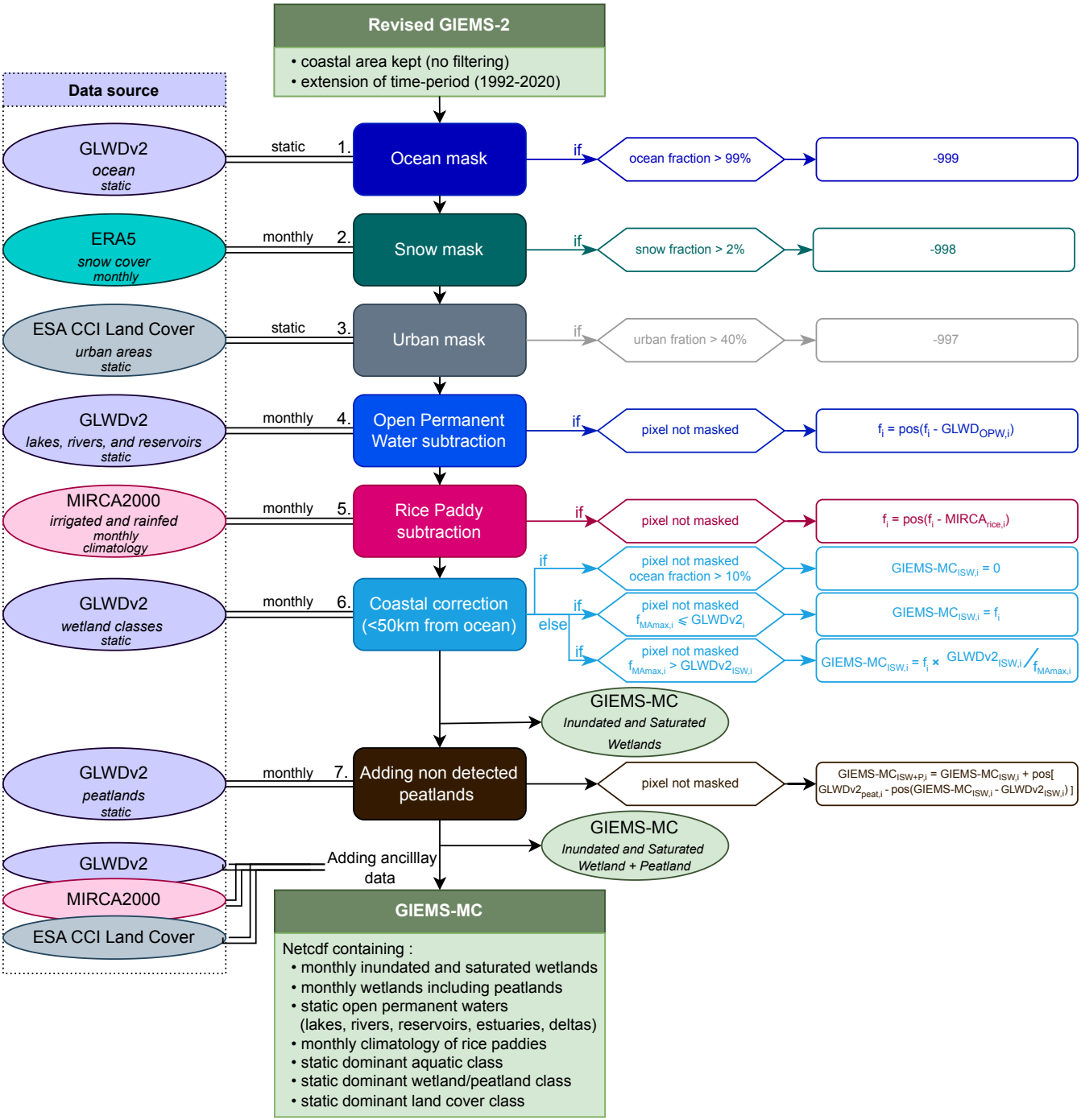
Revised GIEMS-2
• coastal area kept (no filtering)
• extension of time-period (1992-2020)
Data source
GLWDv2
ocean
static
ERA5
snow cover
monthly
ESA CCI Land Cover
urban areas
static
GLWDv2
lakes, rivers, and reservoirs
static
MIRCA2000
irrigated and rainfed
monthly
climatology
GLWDv2
wetland classes
static
GLWDv2
peatlands
static
GLWDv2
MIRCA2000
ESA CCI Land Cover
static
1.
Ocean mask
monthly
2.
Snow mask
static
3.
Urban mask
monthly
4.
Open Permanent Water subtraction
monthly
5.
Rice Paddy subtraction
monthly
6.
Coastal correction (<50km from ocean)
monthly
7.
Adding non detected peatlands
Adding ancilllay data
if
ocean fraction > 99%
-999
if
snow fraction > 2%
-998
if
urban fration > 40%
-997
if
pixel not masked
$f_i = pos(f_i - GLWD_{OPW,i})$
if
pixel not masked
$f_i = pos(f_i - MIRCA_{rice,i})$
if
pixel not masked
ocean fraction > 10%
$GIEMS\text{-}MC_{ISW,i} = 0$
if
pixel not masked
$f_{MAmax,i} \leqslant GLWDv2_i$
$GIEMS\text{-}MC_{ISW,i} = f_i$
else
if
pixel not masked
$f_{MAmax,i} > GLWDv2_{ISW,i}$
$GIEMS\text{-}MC_{ISW,i} = f_i \times GLWDv2_{ISW,i} / f_{MAmax,i}$
GIEMS-MC
Inundated and Saturated Wetlands
if
pixel not masked
$GIEMS\text{-}MC_{ISW+P,i} = GIEMS\text{-}MC_{ISW,i} + pos[GLWDv2_{peat,i} - pos(GIEMS\text{-}MC_{ISW,i} - GLWDv2_{ISW,i})]$
GIEMS-MC
Inundated and Saturated Wetland + Peatland
GIEMS-MC
Netcdf containing :
• monthly inundated and saturated wetlands
• monthly wetlands including peatlands
• static open permanent waters
(lakes, rivers, reservoirs, estuaries, deltas)
• monthly climatology of rice paddies
• static dominant aquatic class
• static dominant wetland/peatland class
• static dominant land cover class