



SCIENCE AND
EDUCATION **FOR**
SUSTAINABLE
LIFE

Technical reporting challenges as handling multiple land use conversions under the LULUCF-regulation

EU/2018/841

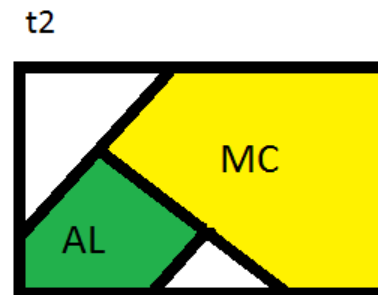
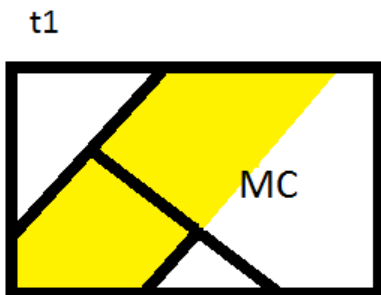
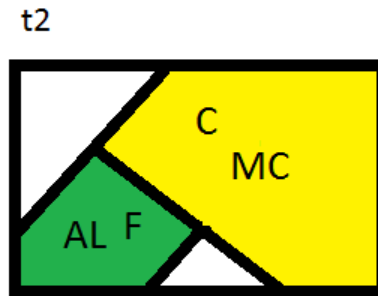
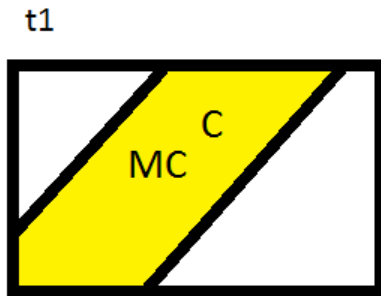
Varese May 28-29 2019

Same land or accounting category?

The accounting (Article 2 and Article 7.1)

E.g. land under MG, MC or MW in 2021-2030 is net-net accounted as the differences in pools compared with land under the same activity 2005-2009 (not compared with the same land in 2005-2009).

This implies that e.g. Cropland in 2007 can be a reference (net-net) under MC from 2027 and the same land is accounted as gross-net under AL 2027.



Gross-Net

| | | |
|---|----|---|
| F | to | C |
| 8 | | 2 |

| | |
|----|----|
| FF | FC |
| 0 | -6 |
| -8 | 2 |

Managed Forest Land

MFL is accounted net-net to the FRL. When developing the FRL, assume that an emission of 10 units is projected to arise from DL. But in 2021-2025 the actual emission is 5 units under DL. Then the FRL have to revised from a technical correction. If no technical correction is made, a MS will gain from overestimating DL when developing the FRL (and loose from underestimating). (The same may be valid for AL. *A question is if a technical correction should be made if Forest land is set aside for nature conservation, unmanaged Forest land, extreme weather?*)

Example

| FRL | | 2021-2025 | | Accounted | | Accounted after technical correction | |
|-----|-----|-----------|-----|-----------|-----|--------------------------------------|-----|
| DL | MFL | DL | MFL | DL | MFL | DL | MFL |
| 10 | -50 | 5 | -60 | 5 | -10 | 5 | -5 |

This was an example using numbers but it is the areas that should be corrected!



Starting year for accumulating land use conversions?

It's important to have conversion categories "in balance", especially when using net-net accounting. But the starting year is not regulated. Its likely that "as soon as possible" or 1990 will be used by the MS. Its important that the starting year is at least 20 years before 2005-2009.

| t1 | t2 |
|------------|-------|
| Unbalanced | |
| C | FC CC |
| F | CF FF |
| Balanced | |
| FC CC | FC CC |
| CF FF | CF FF |

Managed Land Use Proxy

It's likely that IPCC will argue that “generally managed land cannot become unmanaged” (even if erosion, natural degeneration and beavers sometimes may change land use naturally). If for example, Forest land (managed) is converted to Wetlands (unmanaged, sparsely tree covered) then this converted land will be reported (and accounted) under DL. Observe that this is a land use change and that no trees are harvested. The few remaining trees continue to grow and a net removal may therefore be reported under DL.

My impression (Grassi personal communication) is that a MS may (within IPCC limits) divide land into managed and unmanaged land. This is not clear in the regulation.



Under the regulation managed land cannot leave the reporting but the accounting

After 20 years in conversing category, F, C, G, W, S or O, the land is reported as remaining in the category it was conversed to (Article 5.3). Thus land may leave the accounting and the regulation does not introduce precedence/hierarchy among “activities”



Accounting and reporting multiple land use conversions is not solved

Afforested Land (gross-net accounted Article 6)

C, G, S, O, W to F is gross-net accounted as AL for 30 years then as MFL (30 years, if justified by IPCC otherwise 20)

If multiple land use conversions (examples):

| Year: | 0 | 8 | 19 | 24 | 35 | 55 |
|--------|--------|--------|--------|--------|----------------------|---------|
| LandU: | C to F | F to G | G to C | C to W | W to O | O rem O |
| Acc.1: | AL | DL | DL | DL | DL, yr 28 MW | no |
| Acc.2: | AL | AL | AL | AL | AL to yr 30, then MW | no |
| Acc.3: | AL | DL | MC | MC | MW | no |

Deforested Land (gross-net accounted Article 6)

F to C, G, S, O, W

Trees may exist on F to O, W

Accounted as DL for 20 and then in the land use category it was converted to

If multiple land use conversions it can be tricky as above...



Accounting and reporting land use conversions

Managed Forest Land

F remaining F
Inflow from AL 20/30 years
Outflow directly to DL

Managed Cropland

C remaining C;
G, W, S, O to C; directly MC
C to W, S, O directly MC and forever or after 20 years MW, not accounted, not
accounted?

Managed Grassland

G remaining G
C, W, S, O to G directly MG
G to W, S, O directly MG and forever or after 20 years MW, not accounted, not
accounted?

Managed Wetland

W remaining W
S, O to WG directly MW
W to S, O directly MW and forever or after 20 years not accounted, not accounted?

