



Mass balance model:

$$\text{DIC}_{(t)} = (\text{DIC}_{(t-1)} - \text{GCP} + \text{R} - \text{CC} + F\text{CO}_2) \times (1 - EX_{(t)}) + \text{DIC}_O \times EX_{(t)}$$

$$\text{TALK}_{(t)} = (\text{TALK}_{(t-1)} - 2\text{CC}) \times (1 - EX_{(t)}) + \text{TALK}_O \times EX_{(t)}$$

$$\text{DOC}_{(t)} = (\text{DOC}_{(t-1)} + \text{NDR}) \times (1 - EX_{(t)}) + \text{DOC}_O \times EX_{(t)}$$