

AMCLIM

Synthetic fertilizers:
 NH_4^+ , NH_3 , urea

Manure: urea, uric acid,
organic N

N input

Hydrolysis
Decomposition

NH_3 emission

Plant
uptake

Runoff

TAN \rightleftharpoons NH_3

NO , N_2O , N_2

Emission

Ammonification

Nitrification

$\text{NO}_3^-/\text{NO}_2^-$

Denitrification

Physical

Biological

Chemical

Leaching &
Diffusion to deep soils