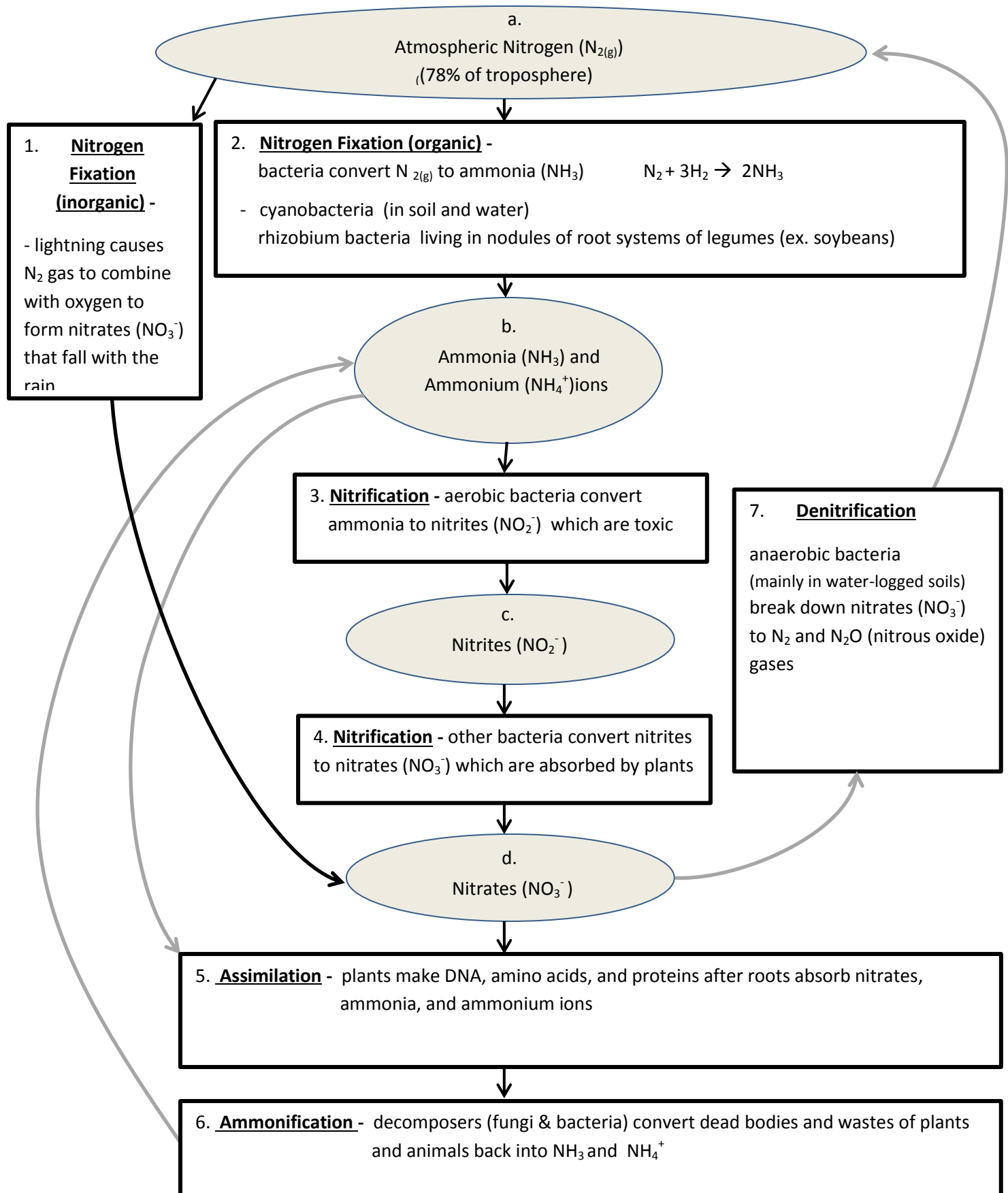


Aim: How is nitrogen cycled through the ecosphere?



HUMAN EFFECTS ON THE NITROGEN CYCLE

1. burning fossil fuels

a. emission of nitrous oxide (N_2O) - a greenhouse gas

b. creates nitric acid (HNO_3) which contributes to acid rain
that damages trees, aquatic systems, and metal & stone structures

2. agricultural practices

a. use of nitrogen-rich synthetic/chemical fertilizers

b. livestock waste – solids and liquids are rich in nitrogen (and phosphorus)
and more N_2O gas is produced

c. cultivating nitrogen-fixing crops (or interplanting of legumes)

d. accelerates **Eutrophication** - the natural nutrient-enrichment of a body of water
oligotrophic – nutrient-poor
mesotrophic – transitioning stage
eutrophic – nutrient-rich

leads to ... **Cultural or Artificial Eutrophication**

agricultural / urban runoff from human activities adds
excess nitrogen (and phosphorus) to aquatic ecosystems