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Task Force on Reactive Nitrogen

Expert Panel on Nitrogen Balances and Budgets

Agenda



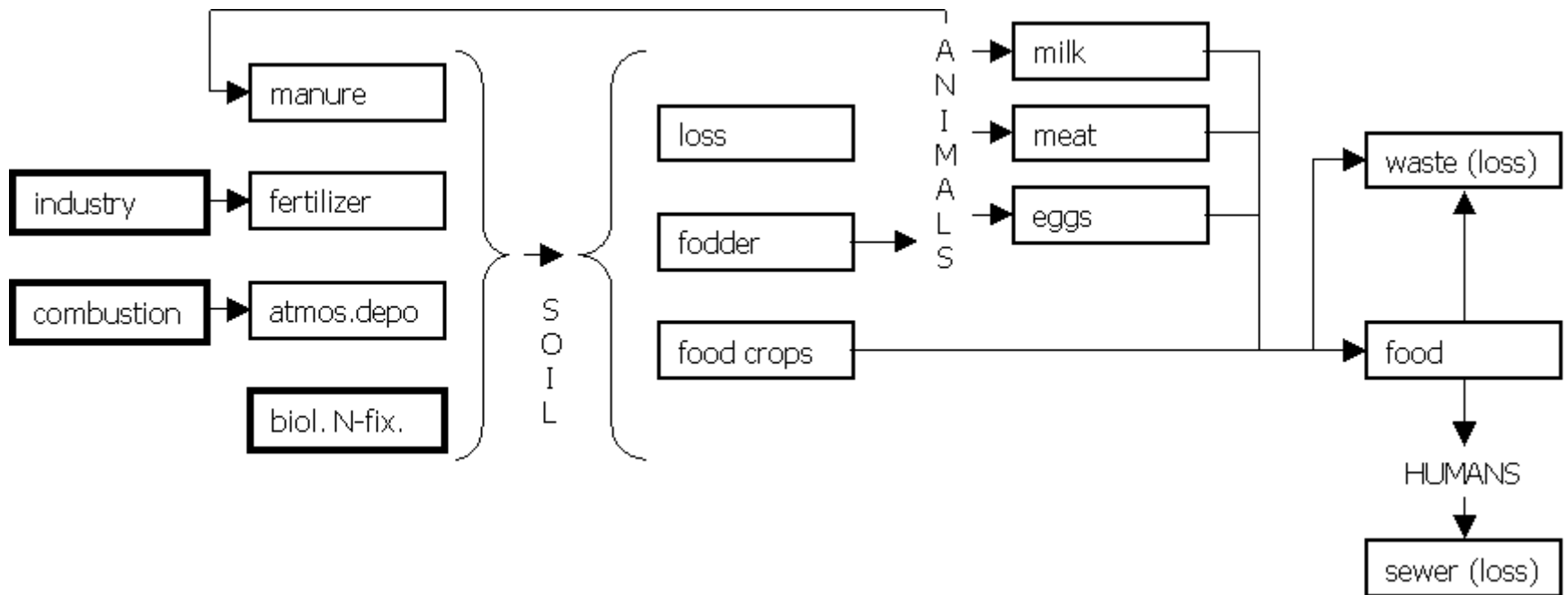
- Status
(available partial balances / full country-specific flux budgets)
- Potential uses of N balances and budgets
- Which areas require our attention?
- Proposed activities until the TFRN meeting (April 2009)
- Request from the TFRN: “N in human diets” to consider abatement strategies – can we provide expertise?
- **Chapter INTEGRATION / BUDGETS for ENA**
- Broadening the EP network – EP participation beyond ENA
- AOB

Background



- Nitrogen fixation requires much energy (combustion, BNF, industrial production)
- Fixed nitrogen (reactive nitrogen) does not easily decay (denitrification)
- Fate of fixed nitrogen can be followed throughout the environmental pools ("cascade") in order to obtain better understanding on the processes involved
- Basic principle: Conservation of matter

(country) N-balances



Note: imports/exports can be neglected for a global situation

Trends in different environmental pools

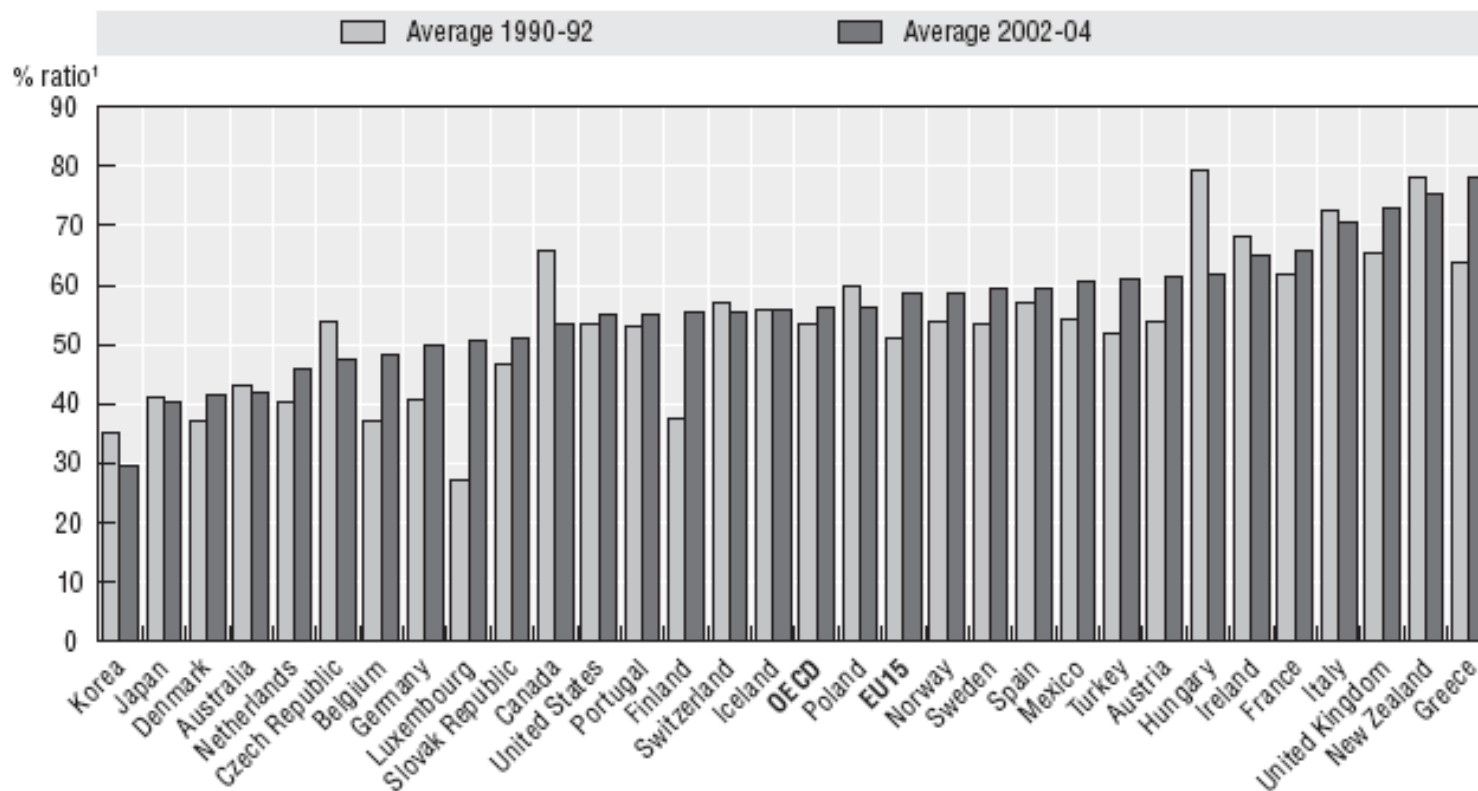


- Decreasing ammonia emissions (CH)
 - Expected: decreased atmospheric concentrations
 - BUT: effect is not linear
(greater fraction of gaseous ammonia leads to a longer lifetime)
- important with respect to success of abatement measures

Status: e.g., OECD soil balances



Figure 1.2.7. Nitrogen efficiency¹ based on gross nitrogen balances



How to guide national experts?

Potential uses of N balances and budgets



- Validation
- Information transfer

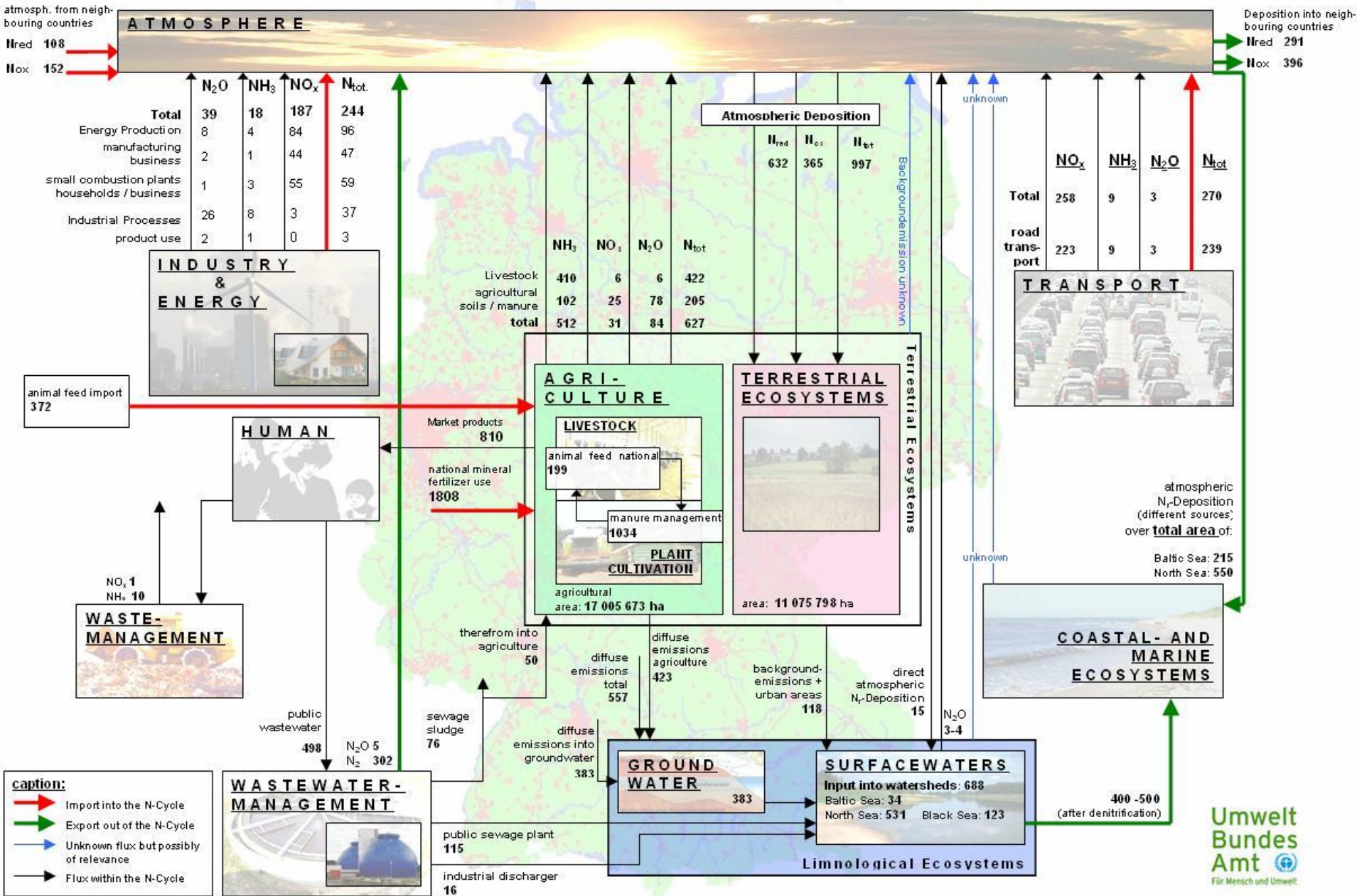
... across disciplinary boundaries, differences in scale and scope (e.g., watersheds vs. administrative units)

- Spatial pattern / temporal pattern ?

IMPORT

NITROGEN-FLUXES IN GERMANY

EXPORT



Proposed activities until the TFRN meeting (April 2009)



- Start out from “chapter 13” – what is the current standard?
- Devise program to arrive at “German standard”
- Develop EPNBB strategy:
 - Head for NBB guidelines
 - Goal of work: journal publication
- Maintain policy orientation (problem oriented)

Broadening the EP network – EP participation beyond ENA



- Participation at next TFRN
- Scientific contact
- Contact national environment agencies:
involve National Experts!