Expert Panel on Nitrogen and Food

Proposal for approach and terms of reference

TFRN-3 Amsterdam
November 24-25 2009

CO-CHAIRS:
Christian Pallière (EFMA)
and
Henk Westhoek (PBL)
Suggested tasks

1. to create a **better understanding** of the relationship between human diets and the N-cycle;
2. to investigate **the effects a lower human intake** of plant and animal originated protein **on N emissions and the societal cost** for mitigation NH3 and greenhouse gas emissions;
3. to investigate **additional side-benefits** of dietary changes, compared with technical measures, including effects on land use, greenhouse gas emissions and biodiversity.
4. to **investigate the translation of the WHO-recommendations** for protein into national requirements and to analyze the current human diets in (most) countries (parties of CLRTAP).
Large N losses in production chain
Large differences in consumption of animal products

Consumption of animal proteins per region

- North America
- EU
- OECD Asia
- Russia
- Latin America
- China
- Rest of Asia
- Africa

kg proteins/cap/year vs. Population (cumulative)
Suggested approach

N in agriculture
- Determine N balances per food product
- Uptake, export and losses (in % and values)
- Link volume of N losses to societal costs

Current diets and N
- Current diets in countries
- Translation of diet components to N losses (air, GHG, water)

Gap analysis
- Translation of WHO standards to local recommendations
- Determine difference actual consumption and WHO / national recommendation
- Potential for improvement (steps in food chain; in which food sectors?)
Suggested time frame

2009: Definition of task
       Invitation of experts

2010: 1-2 meetings
       First draft document

2011: 1-2 meetings
       Draft final document:
       internal and external review
       Adoption of final document by TFRN
Expertise needed

Expertise on:

• Nutrition

• Nitrogen flows and losses in agro-systems

• Step from agriculture to food (amongst others: losses in the food production chain)