

atf

animal
task
force

A European Public-Private Partnership



EAAP

European Federation of Animal Science



2nd one-day symposium of the Animal Task Force & the EAAP Commission on Livestock Farming Systems

GHG emissions mitigation
in practice: a Dutch farmer
with monogastrics &
ruminants

Iwan Gijsbers



**Livestock emissions
and the COP26 targets**

Pigfarm with sows and
fatteners
on two locations in the south-
east of the Netherlands



Group sow housing with electronic sow feeders

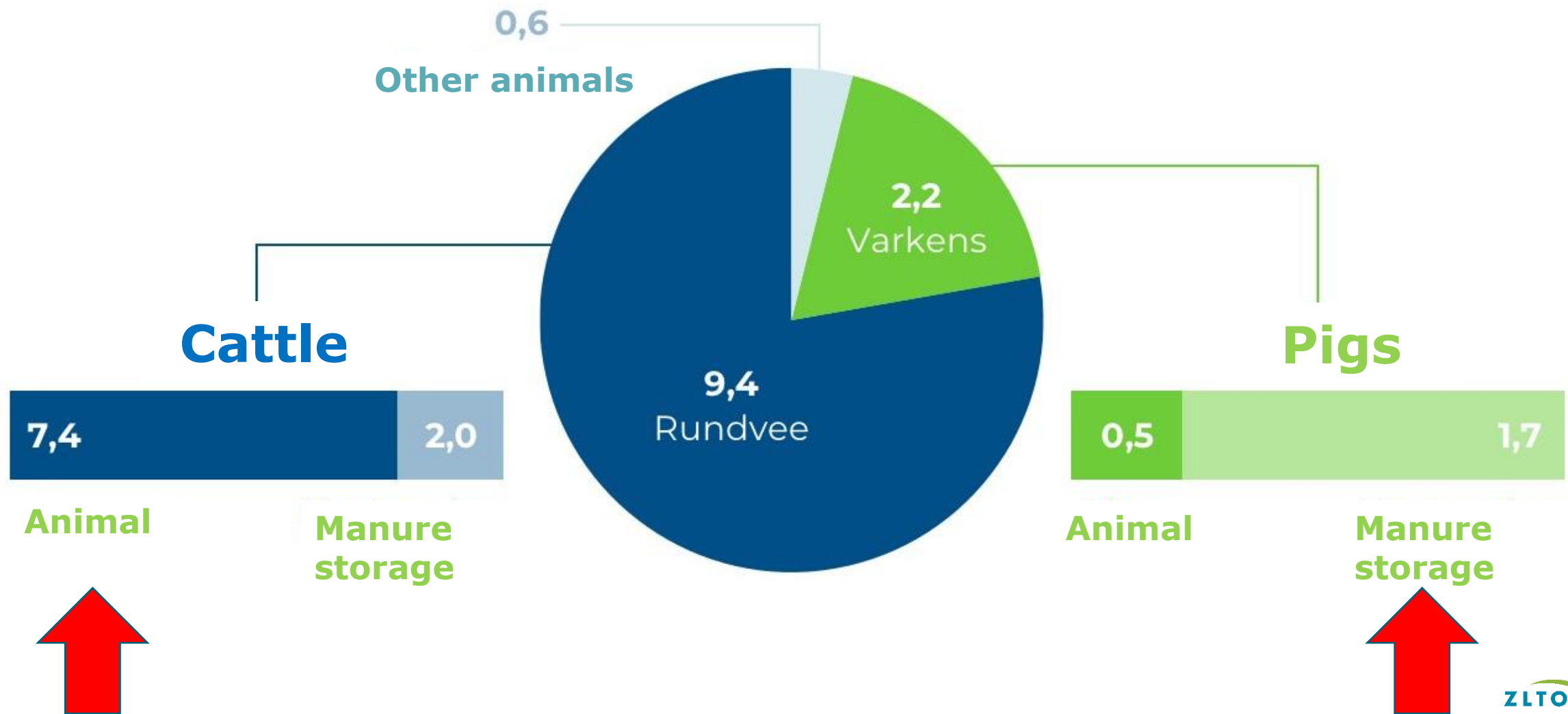
50% of all the manure is being processed to
Solid organic fertiliser, liquid fertiliser substitute
and
Water

All fatteners > 1 m² living surface

Electricity production by solar panels



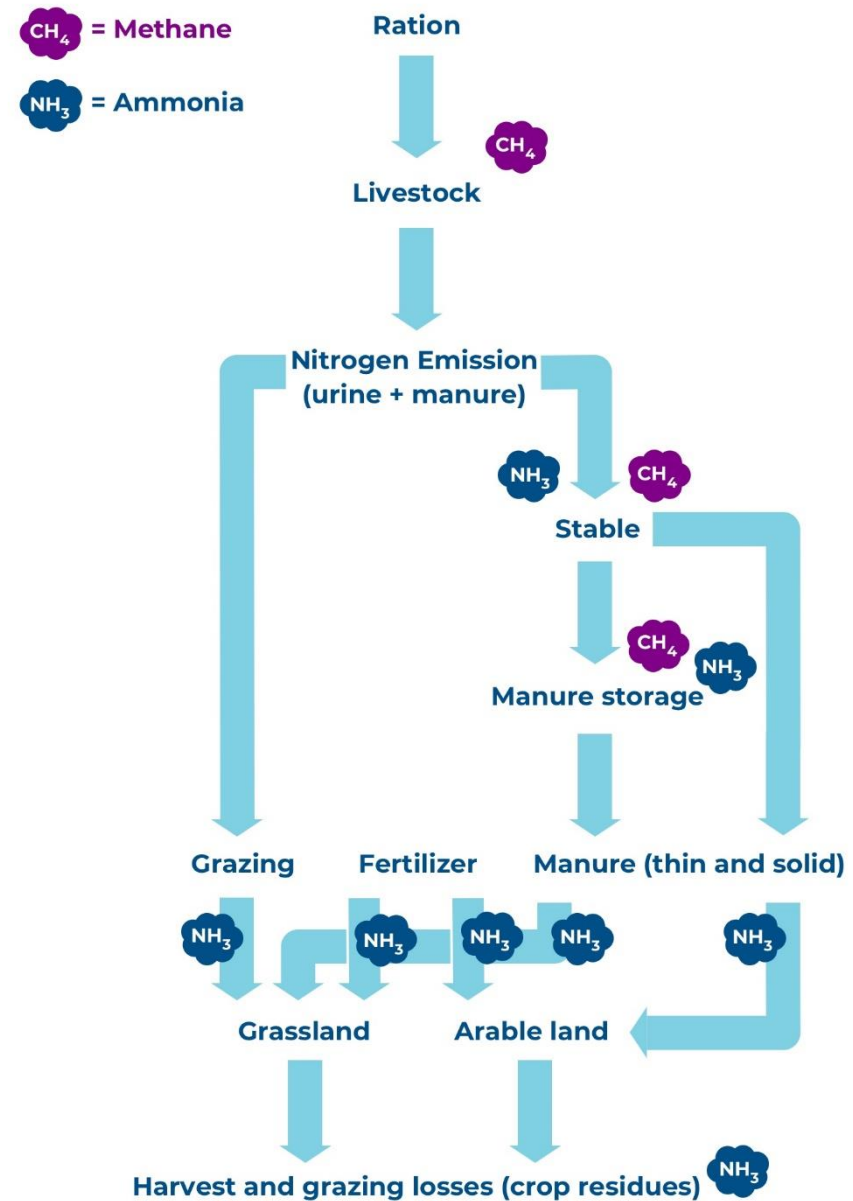
EMISSION OF METHANE IN LIVESTOCK FARMING IN 2018 (NL) (Mton Co2-equivalents)



NEMA

National
Emission
Model for
Agriculture

For NH₃ but also for CH₄



particulate matter - odor
GHG - NH3 - endotoxines -
INTEGRATED APPROACH



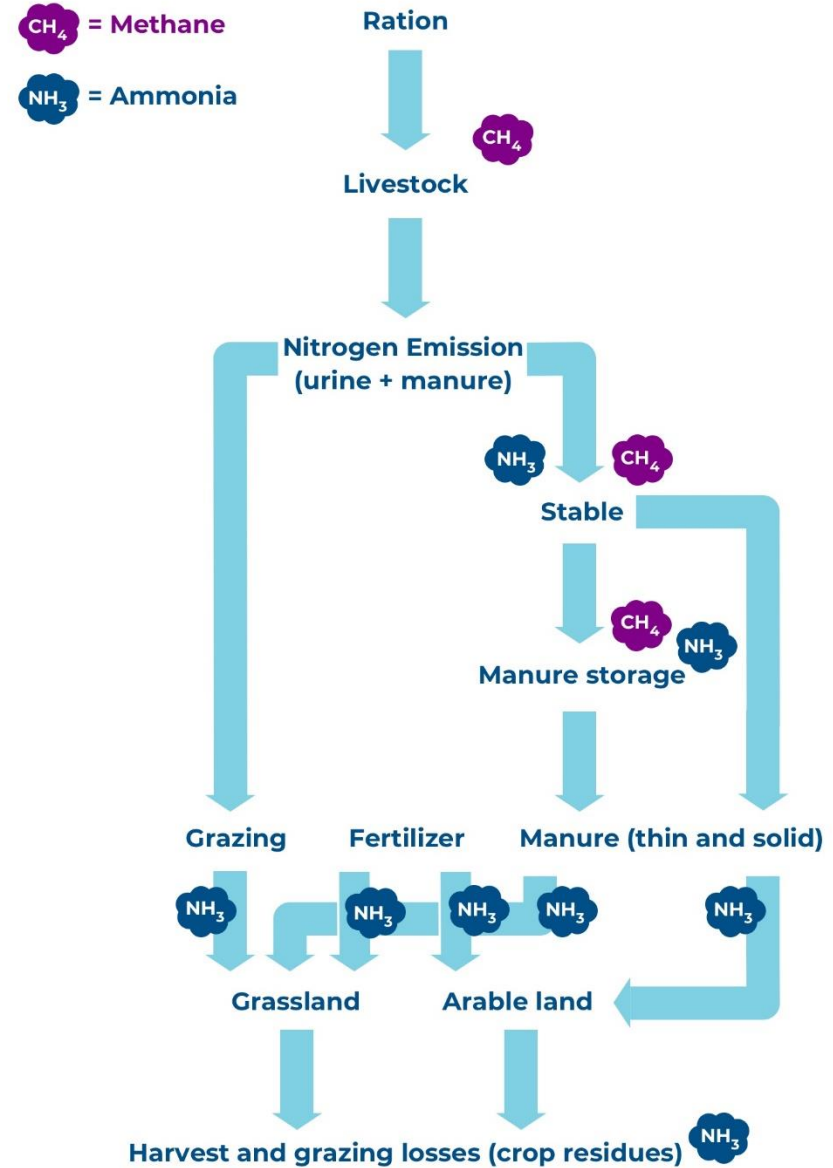
Ruminants



Monogastrics



For nature preservation:
Dutch farmers protests!



Ruminants: solutions to reduce GHG emissions

Animal

breeding / rearing young stock

Feed

reducing input raw protein

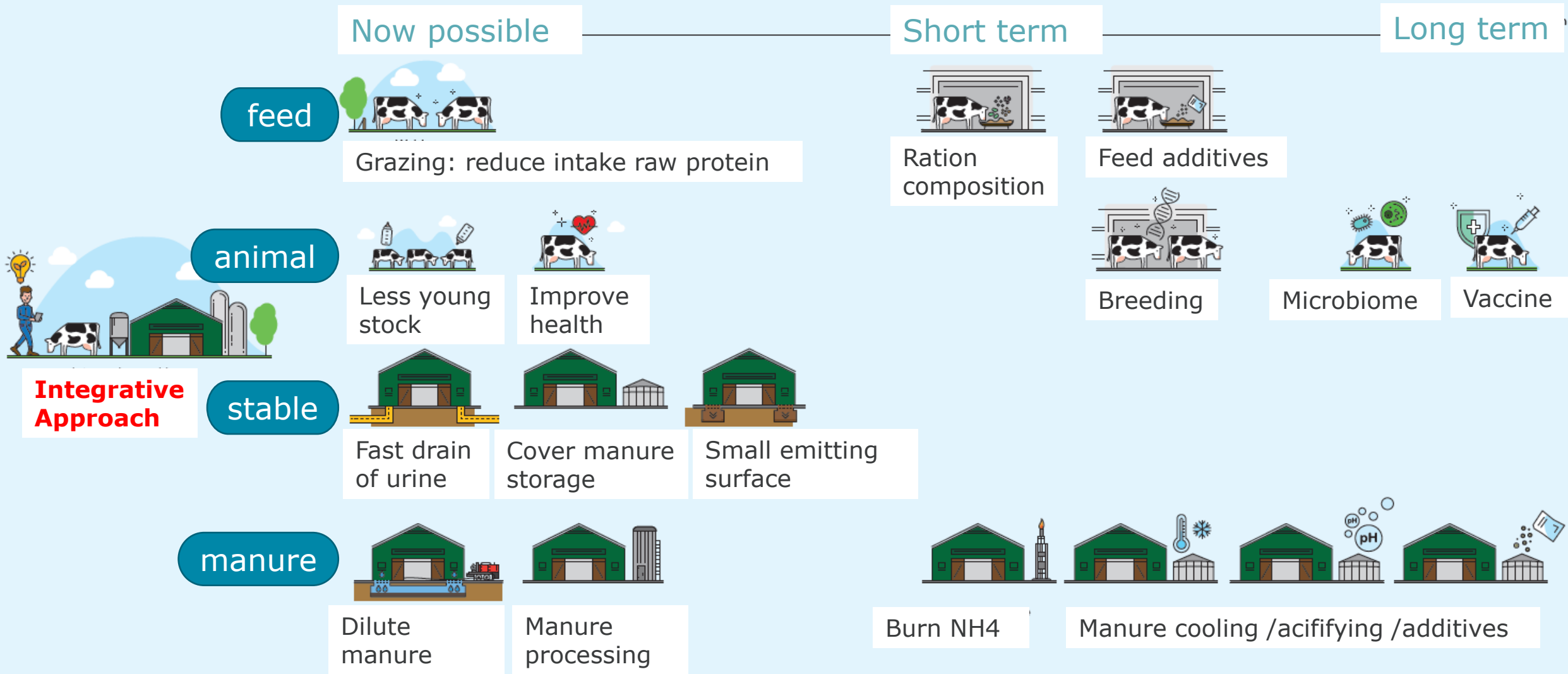
Manure

reduce storage / production biogas

Management

hygiene / manure management

Directions of solutions for emission reduction of NH₃ and CH₄ in dairy farming



Ruminants GHG mitigations in practice



Monogastrics:

Manure reduce storage / production renure

“RENURE”:

any nitrogen containing substance

fully or partially derived from livestock manure

through processing under controlled conditions

that can be used in areas with water pollution by nitrogen

following the same provisions applied to nitrogen containing chemical fertilisers

as defined in the Nitrates Directive (91/676/EEC),

while providing adequate agronomic benefits to enhance plant growth.

ALSO BIG REDUCTION OF AMMONIA EMISSION DURING FERTILIZING THE LAND

Directions of solutions for emission reduction of NH3 and CH4 in pig husbandry

Now possible

Short term

Long term

feed



Less protein in feed



Benzoic acid in feed

animal



Breeding



Microbiome

stable



Fast drain manure



Small emitting surface



Direct manure separation

manure



Mono fermentation



Dilute manure



Manure cooling



Burn NH4



Manure acidifying /additives



Integrative Approach



Monogastrics GHG mitigations in practice



How to bring practical mitigation solutions in practice?

Goals-legislation for farms

Instead of '***measures-legislation***'

Combined with

realtime monitoring of emissions

and ***transparency towards society***

This will ***speed up innovation-power,***

gives farmers ***economic perspectives,***

and brings ***real solutions for GHG emission mitigation***