

Risk-based systems and sustainability

- Insects and for bone meal for feed
- Visual faecal contamination on poultry carcasses
- Pale Soft Exudative in pork, Dark Firm Dry & Ketosis in cattle
- Hydrolysed feathers and offals for food
- Cannot “everything” be heat-treated and made safe?

WG4

Group 1

WG4

Group 2

WG4

Group 3

WG4

Group 4

WG4

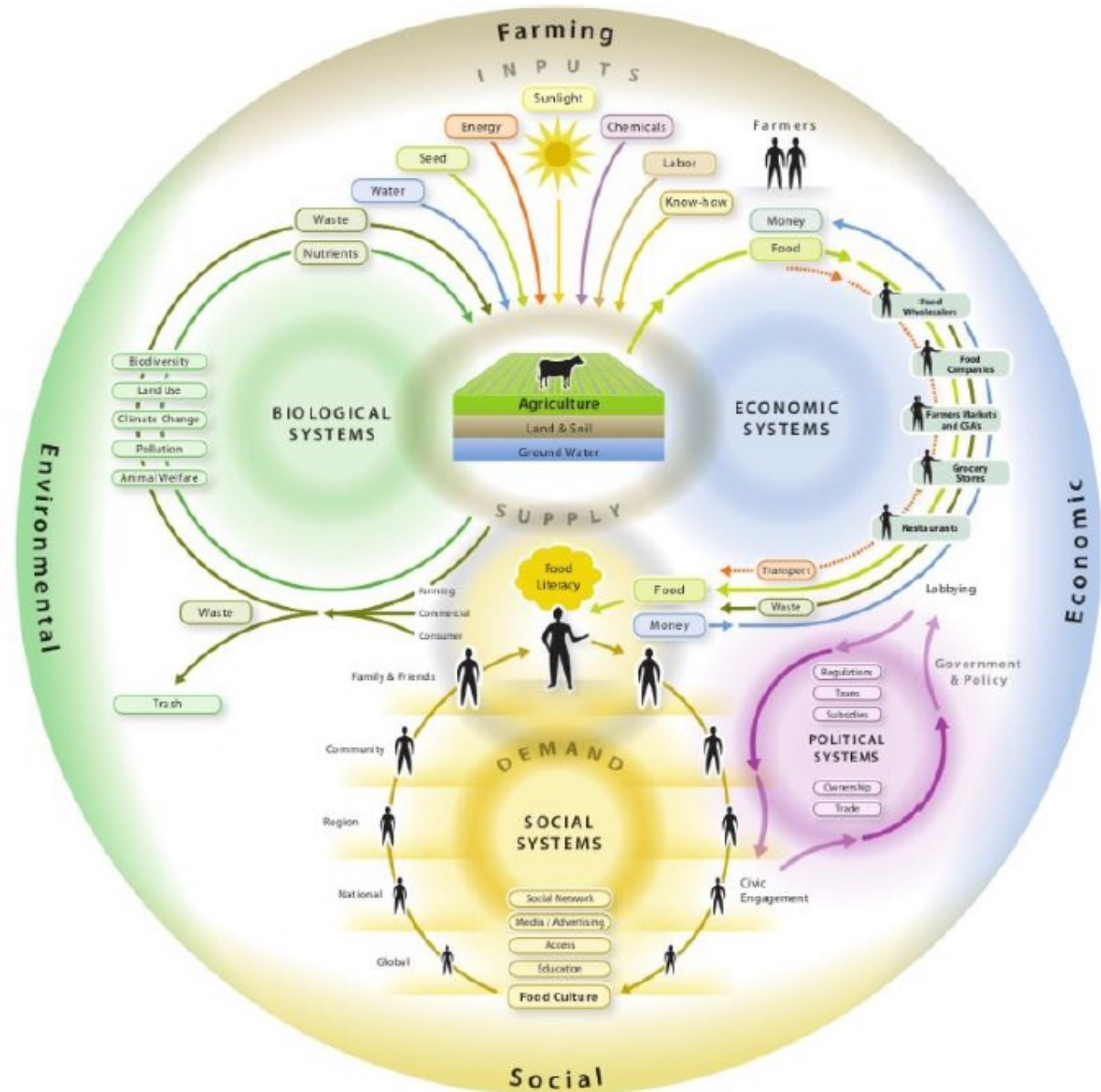
Group 5

Risk-based systems and sustainability

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Sustainability is holistic



- Meat production has an environmental climate dimension on sustainability:
 - To the extent the production utilize fossil carbon, else **carbon circulation**

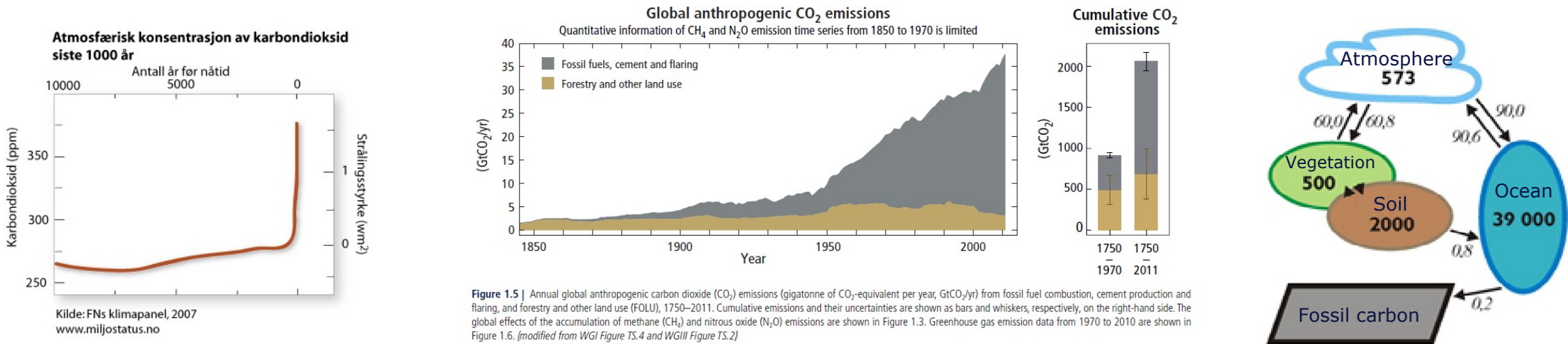
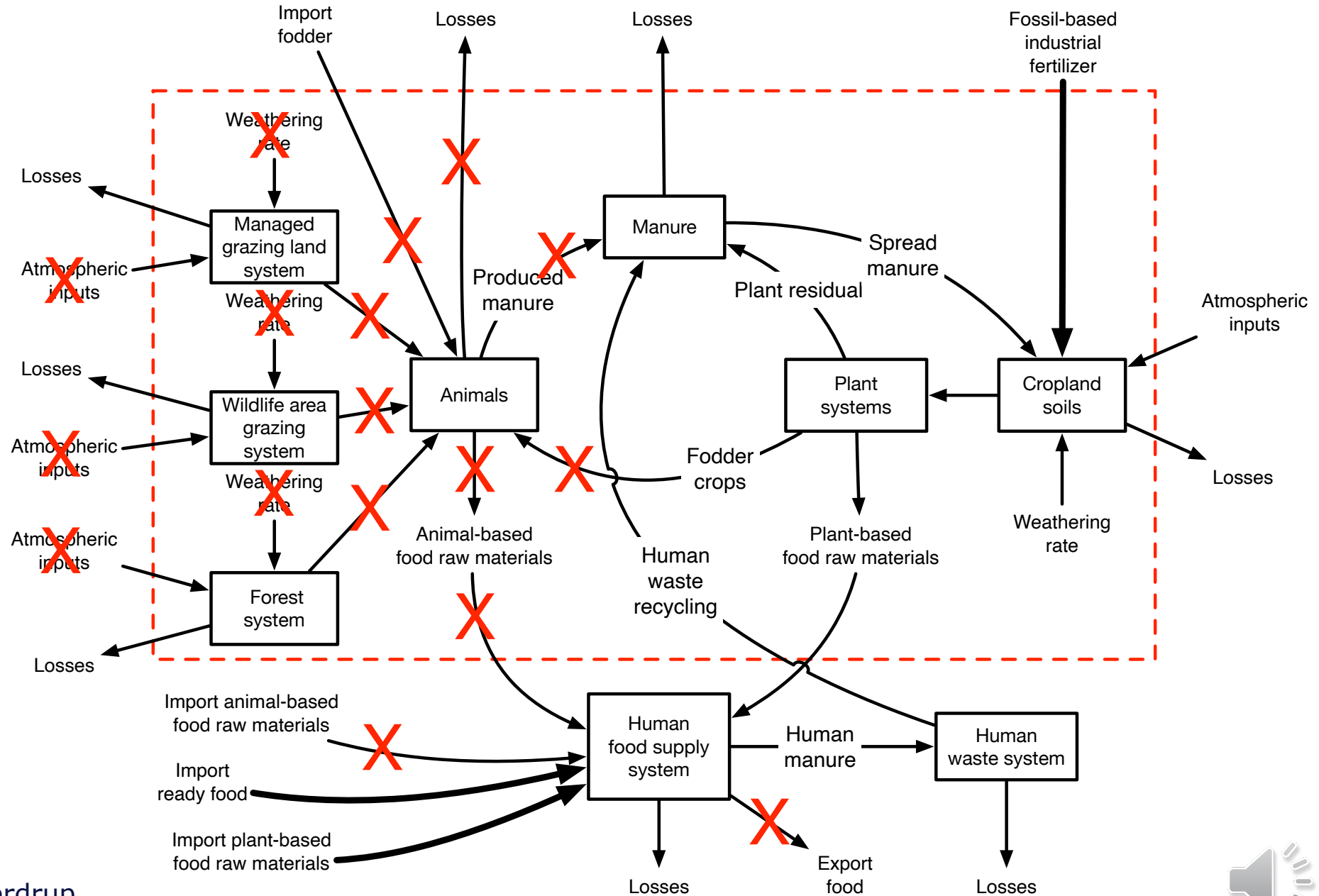


Figure 1.5 | Annual global anthropogenic carbon dioxide (CO₂) emissions (gigatonne of CO₂-equivalent per year, GtCO₂/yr) from fossil fuel combustion, cement production and flaring, and forestry and other land use (FOLU), 1750–2011. Cumulative emissions and their uncertainties are shown as bars and whiskers, respectively, on the right-hand side. The global effects of the accumulation of methane (CH₄) and nitrous oxide (N₂O) emissions are shown in Figure 1.3. Greenhouse gas emission data from 1970 to 2010 are shown in Figure 1.6. (modified from WGI Figure TS.4 and WGIII Figure TS.2)

- MSAS has an impact on sustainable meat production
 - Should not waste edible protein and energy ++
 - Conflict between safety and sustainability?



Take away the animals: Present system collapses



Source: prof. Harald Ulrik Sverdrup

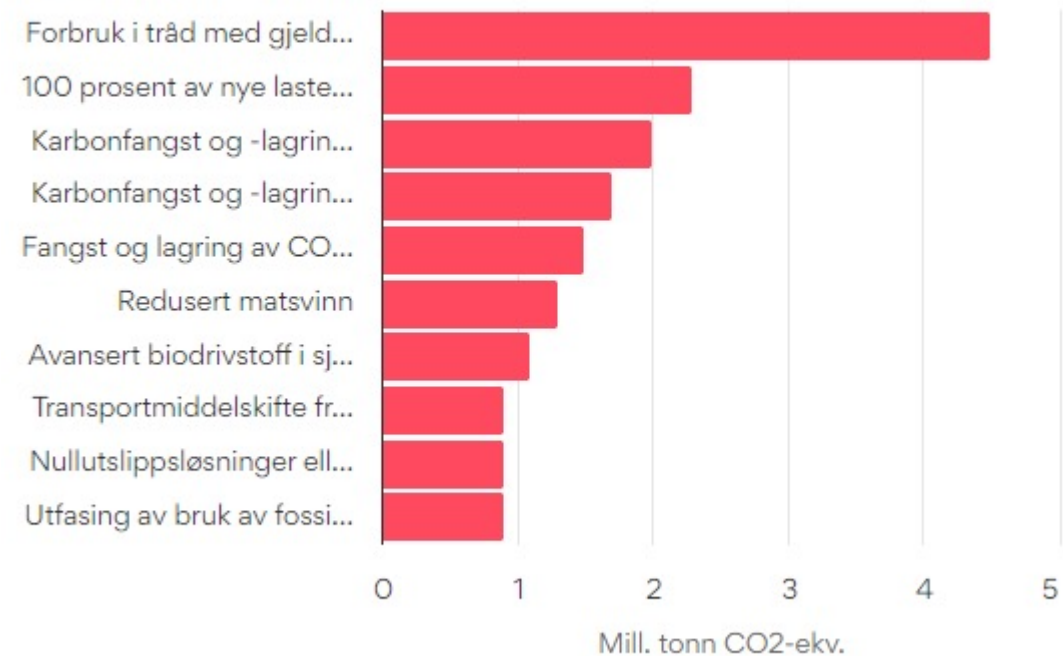


Who is the demagog?

- Change diets
- Electric or biofuel for trucks
- Carbon sequestration in industry (CCS)
- Carbon sequestration in from garbage
- Carbon sequestration from air
- Reduced food waste
- Advanced fuel to ships (H2?)
- From cars to public transport
- Zero emission ferries
- Zero fossil carbon for house heating

Dette kan kutte mest utslipp 2021-2030

Reduksjon i millioner tonn CO2



everviz.com

Norwegian Environment Agency's report «Climate actions in *Norway towards 2030*».