

Sanitation, safe reuse and policy for sustainable food production and environment

Håkan Jönsson

EcoSanRes, Stockholm Environment Institute (SEI), Hakan.Jonsson@sei.se
Swedish University of Agricultural Sciences (SLU), Hakan.Jonsson@et.slu.se

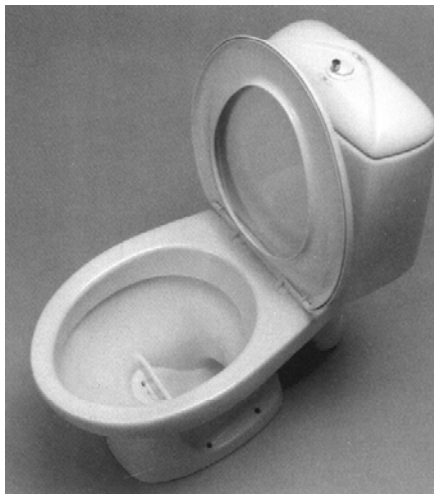
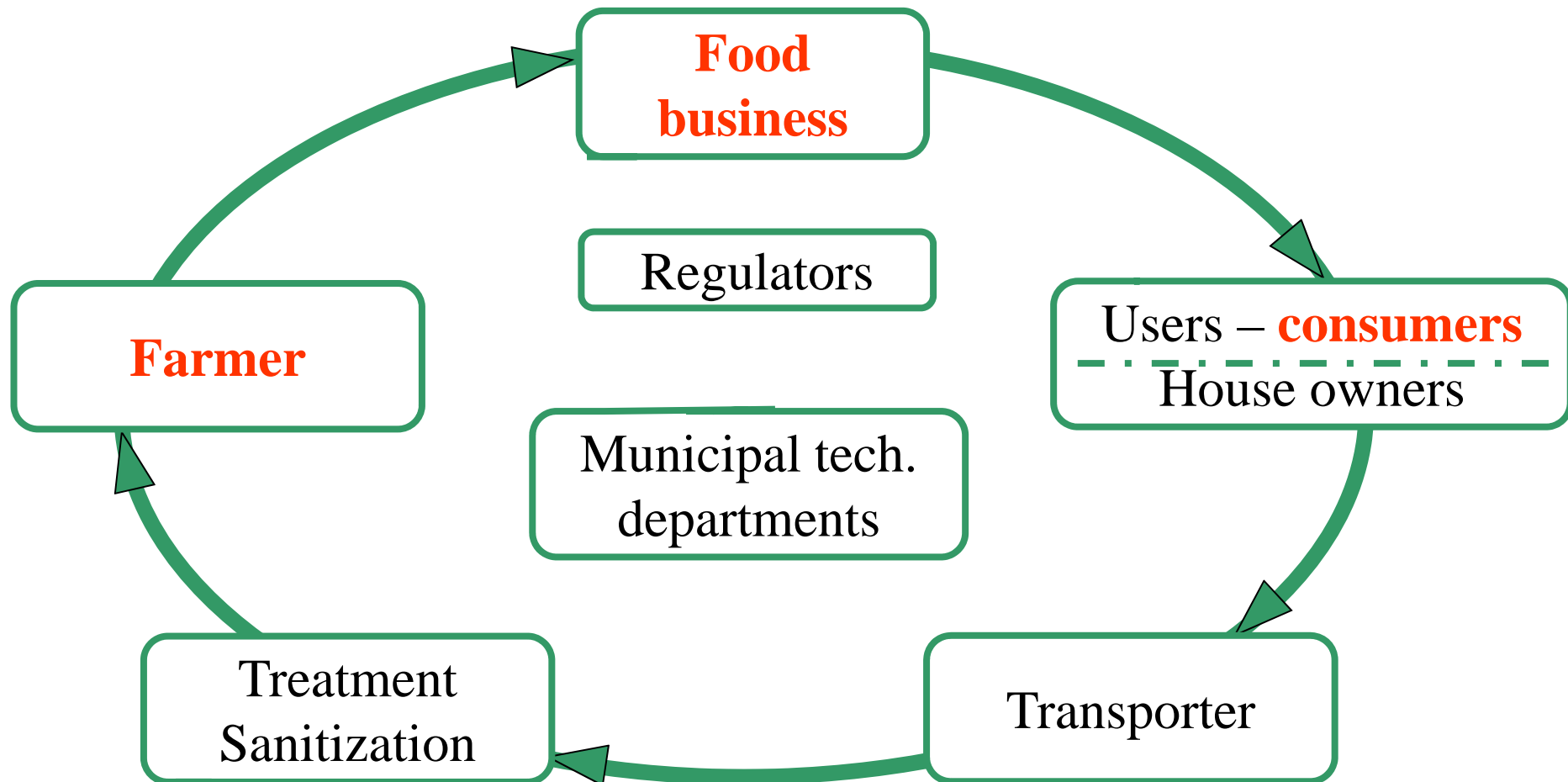


Photo: WME Ecology



Photo: H Jönsson

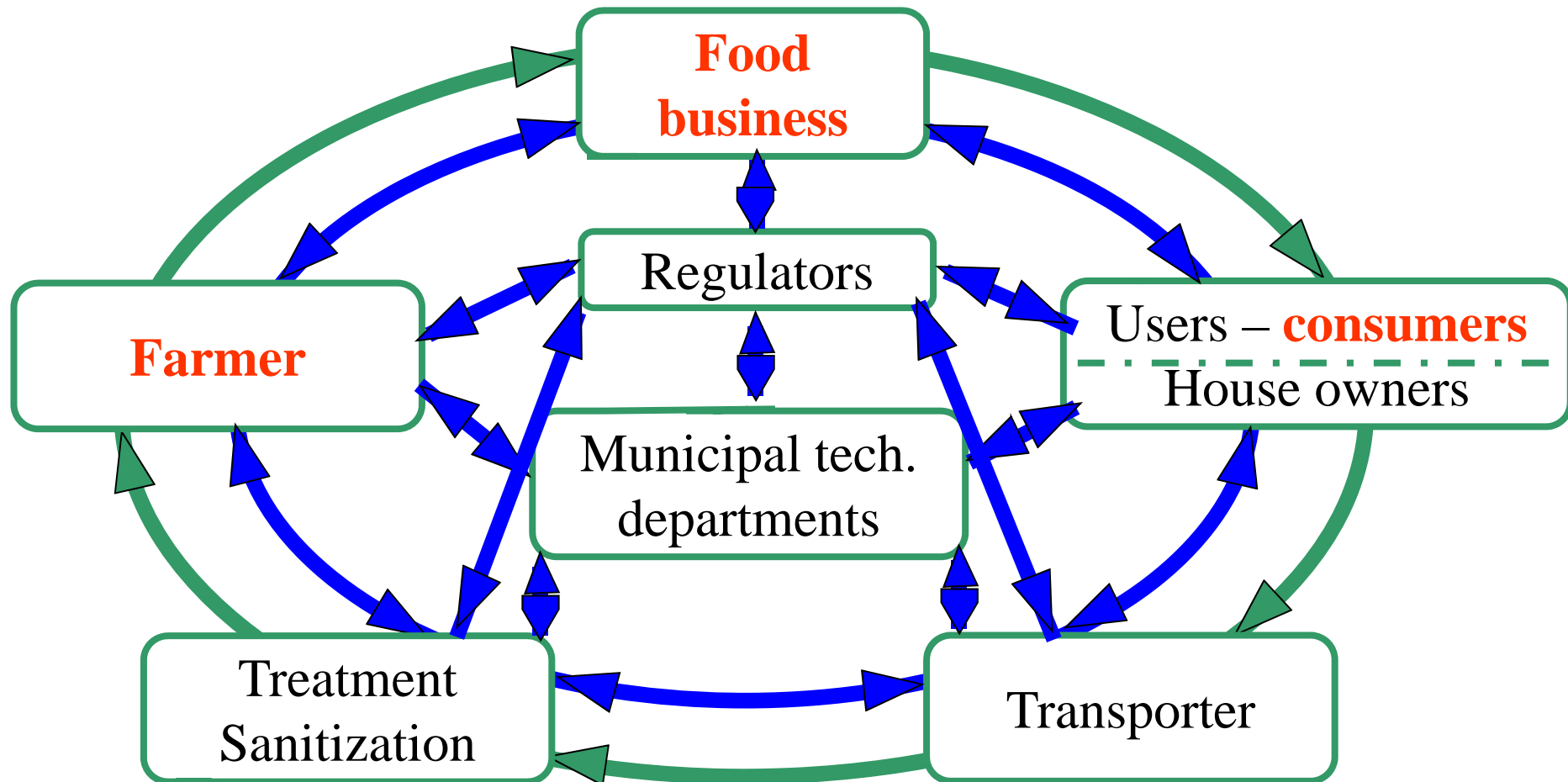
Recycling \Rightarrow many stakeholders



Safe nutrient reuse

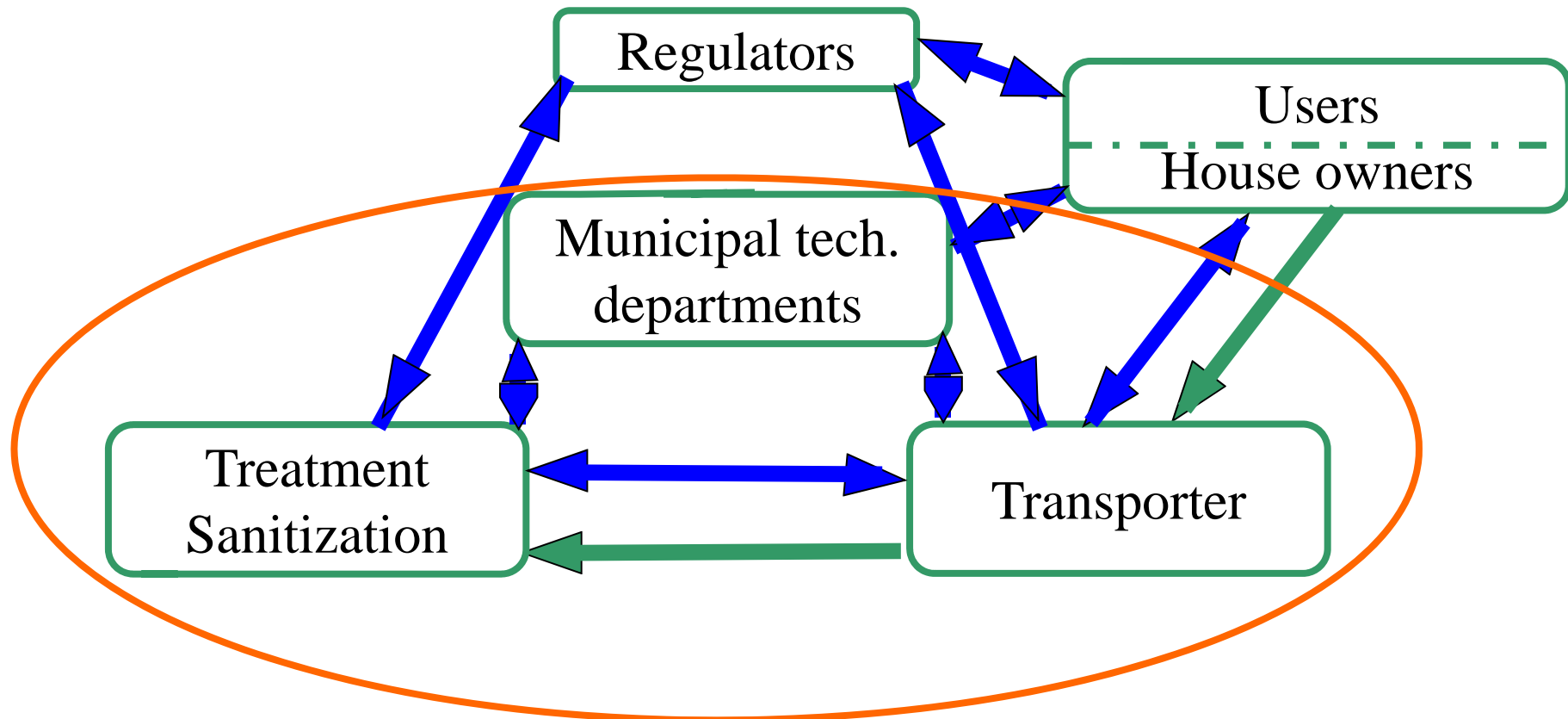
- Is not the same as UDDT
- Can be e.g. dry, blackwater reuse or wastewater irrigation
- Should be safe – think multibarrier approach

Trust, information and a common vision and understanding!



Challenge!

Conventional system

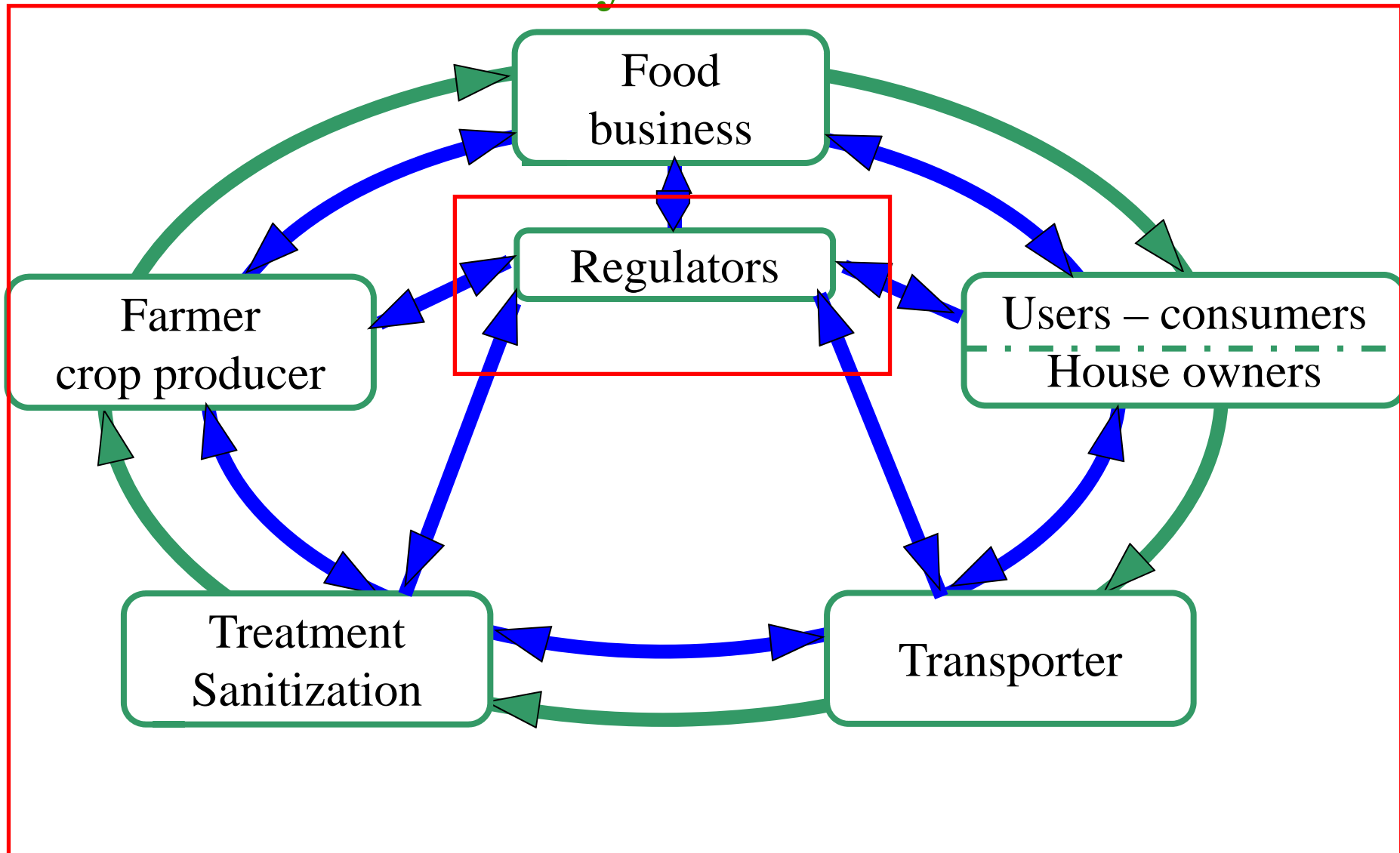


How can we build the trust and a common vision and understanding?

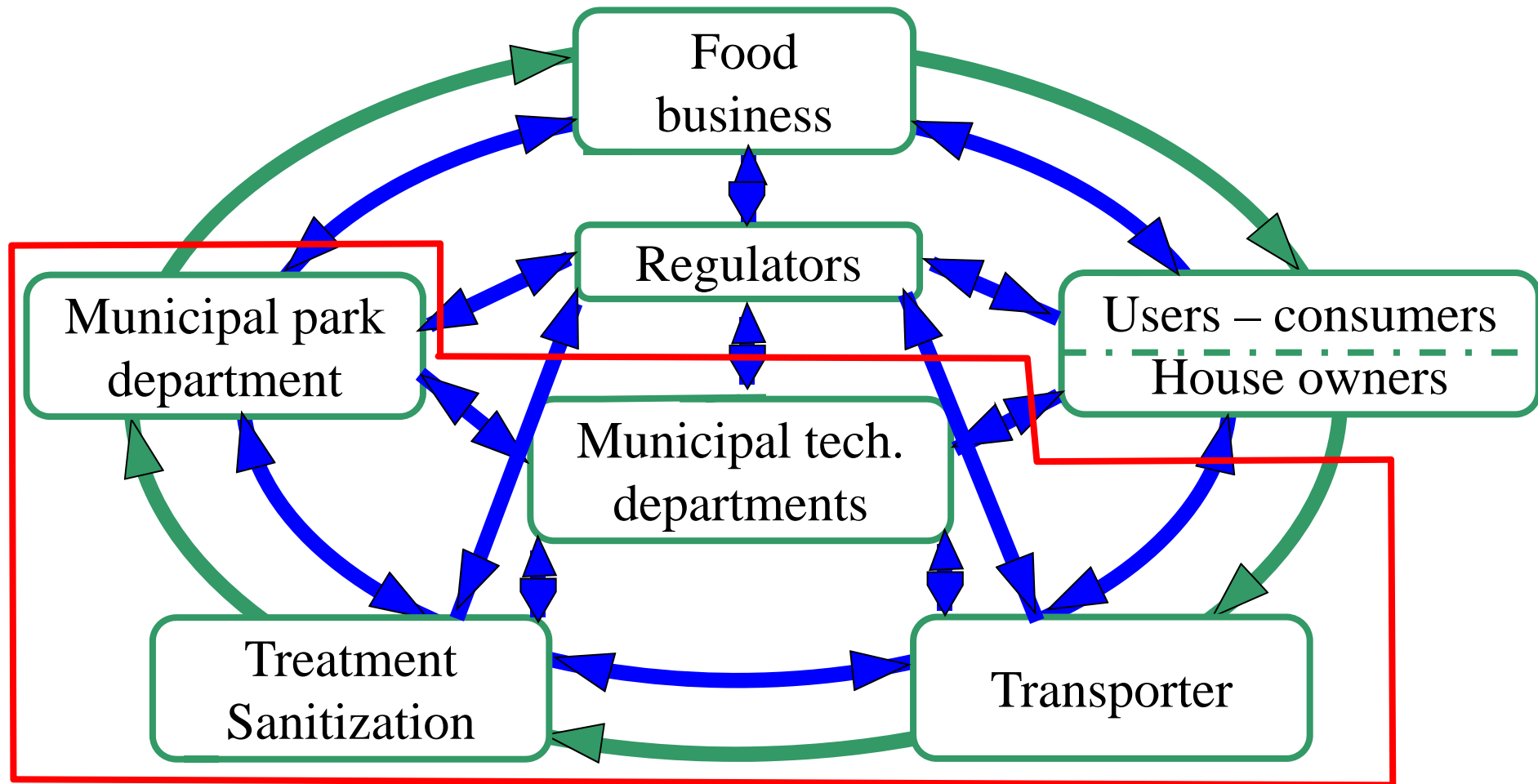
Promote ownership and let it take time

- Involve the farmers, just as the other stakeholders already in the initial planning
- Minimize the number of stakeholders
- Be a good example – show trust in the system
- Create an arena of communication

Substance farmer – reuse on site & you?



Set a good example – promote reuse in municipality (parks, schools etc)



Which type of farmer are you targeting? Which drivers can you use?



Drivers – entry points for farmers

Farmer is economical man

- Entrepreneurship – handling is interesting new business alternative
- Low cost efficient fertilizer – but must know nutrient value/replacement potential
- Impressive crops – higher prize. (Can change culture and perceptions)
- Decreased eutrophying emissions
- **Equipment for handling system (storage spreading)**
- **Labor for handling**
- **Market for produce – consumer reaction**



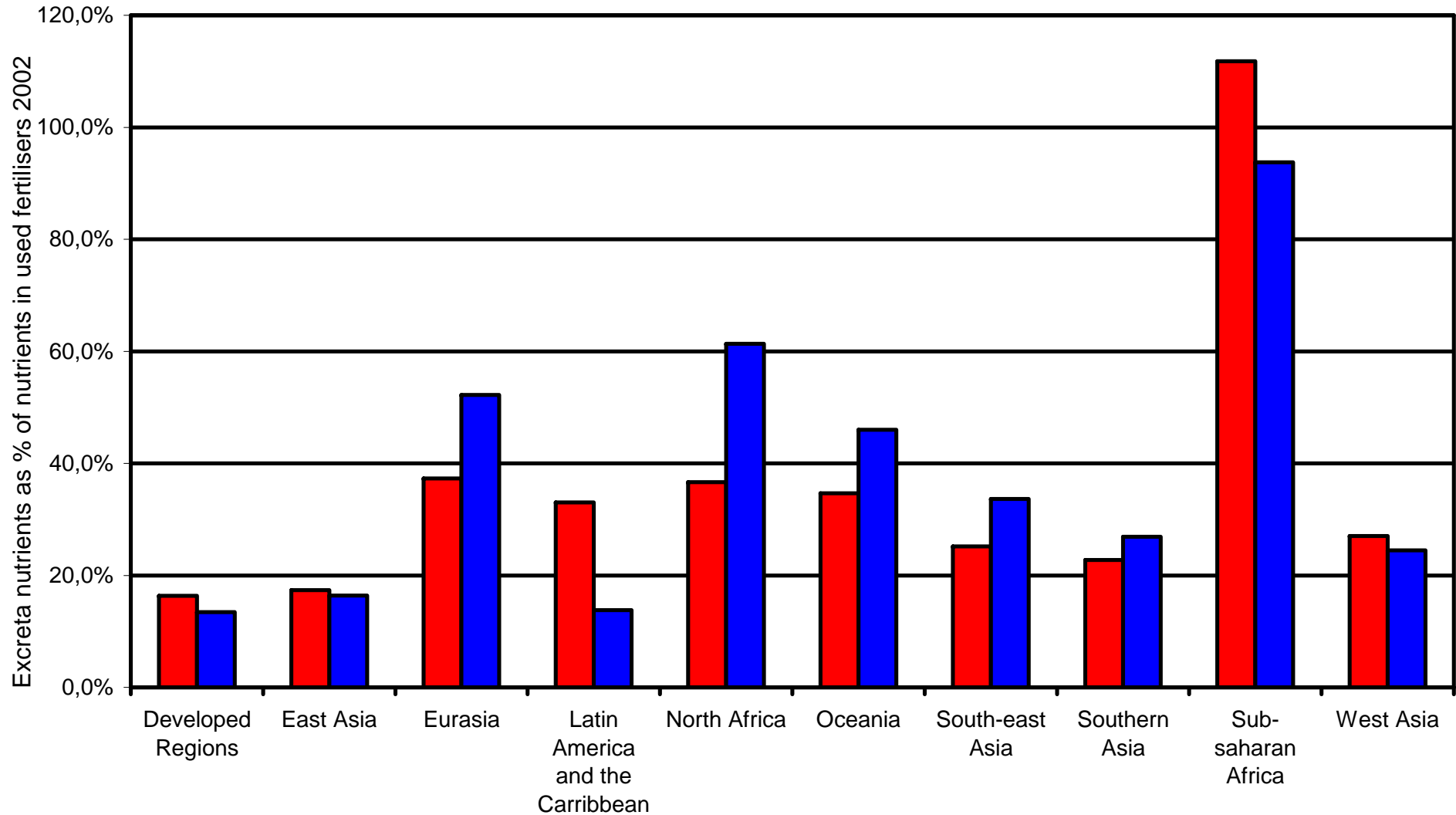
Possible entry points/drivers for Agricultural Department – national & regional level?



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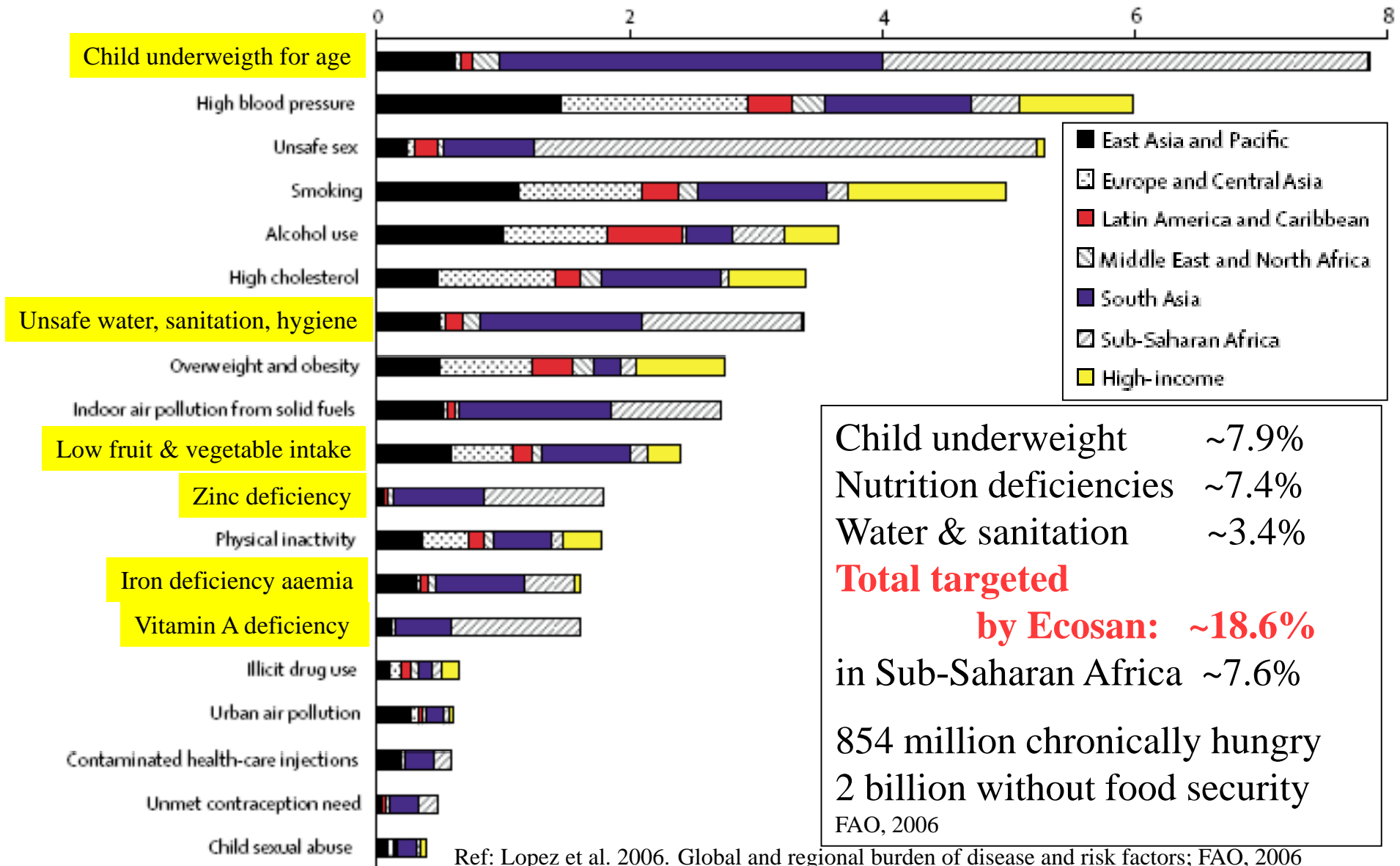
- Who is responsible for fertilizer supply and subsidy?
- Who is responsible for food security and malnutrition?
- Who is responsible for sanitation in emergency situations and in difficult areas?
- Support by research at agricultural institutions.

Nitrogen and phosphorus in excreta as % of used fertilizers



Ref: Rockström et al., 2005

Global risk factors for disease and premature deaths (% of DALYs)



Thank you



Photo: Håkan Jönsson

- My faecal compost was yesterday about 67°C yesterday

From my home garden I now have:

- Potatoes, beets, beans, spinach, onions and garlic and spinach to last us until March/April.
- A freezer full of berries – for family and many gifts.

