



ACHIEVING LOW EMISSIONS THROUGH FOOD CHOICE

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WHAT DO WE EAT?



MALI



ECUADOR



GUATEMALA



GERMANY



AUSTRALIA



USA

(MENZEL and D'ALUISIO 2013)

WHAT DO WE EAT?



ECUADOR



AUSTRALIA



IT AFFECTS OUR HEALTH AND THE CLIMATE!



” The food we eat, the ways we produce it, and the amounts wasted or lost have major impacts on human health and environmental sustainability.

” A diet that includes more plant-based foods and fewer animal source foods is healthy, sustainable, and good for both people and planet.

EAT-Lancet report, 2019



EAT-LANCET REPORT

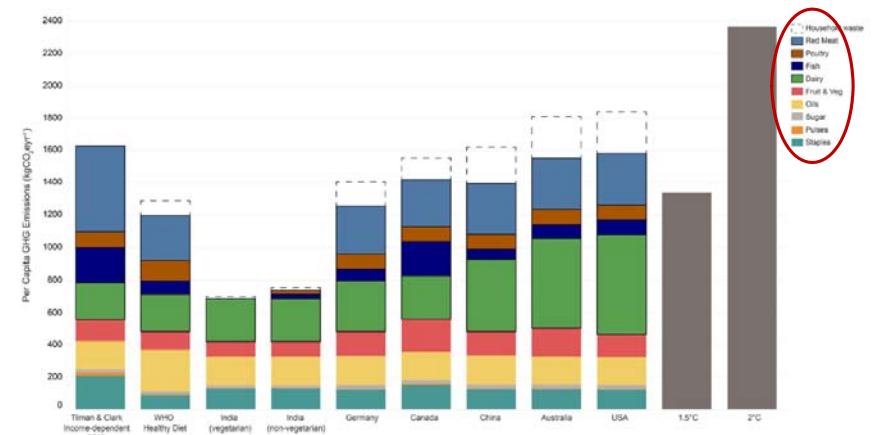


” Without a transformation of the global food system, the world risks failing to meet the UN Sustainable Development Goals (SDGs) and the Paris Agreement and the data are both sufficient and strong enough to warrant immediate action

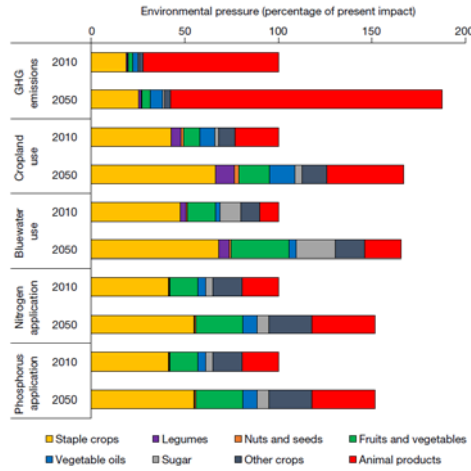
- EAT-LANCET REPORT, 2019



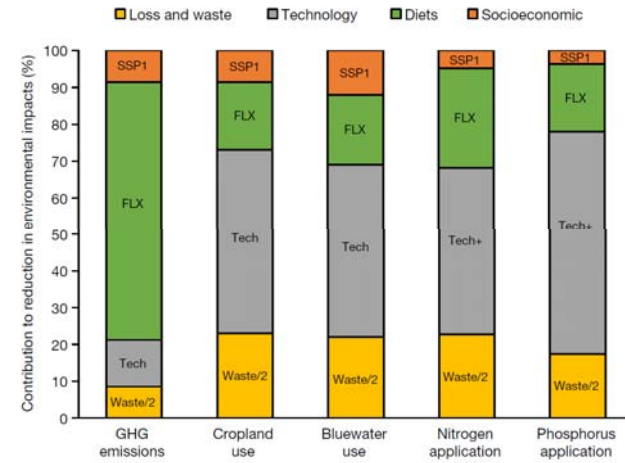
FOOD CHOICE MATTERS!



PROBLEM INCREASES WITH AN INCREASINGLY WEALTHY POPULATION

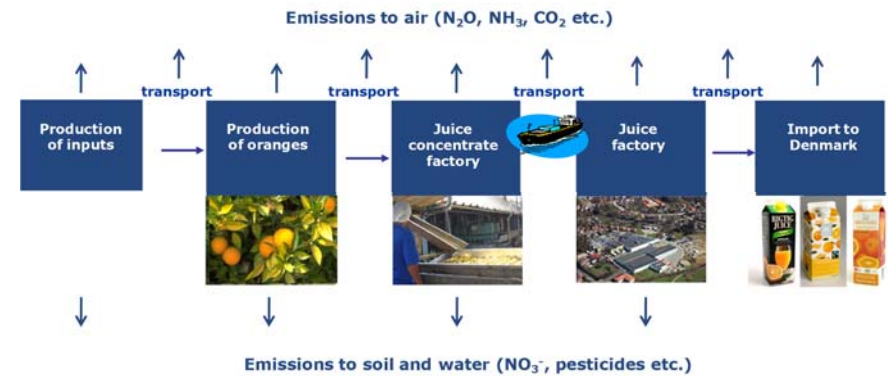


POTENTIAL FOR REDUCTION (SPRINGMAN ET AL. 2018, NATURE)



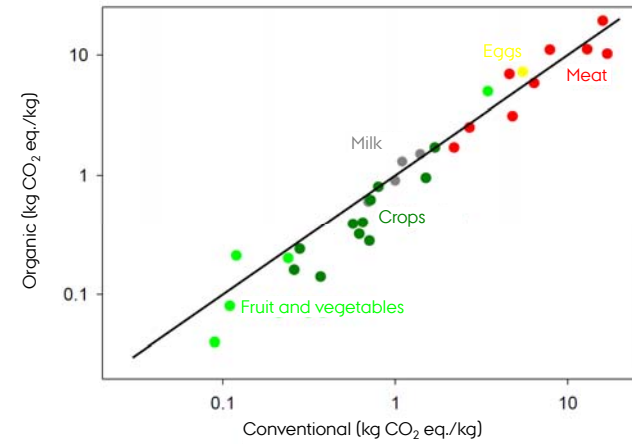
CARBON FOOTPRINT OF FOOD?

CALCULATED USING LIFE CYCLE ASSESSMENTS

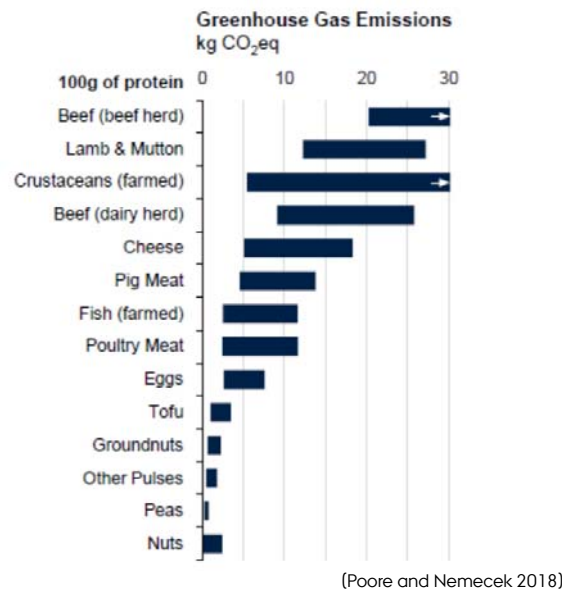




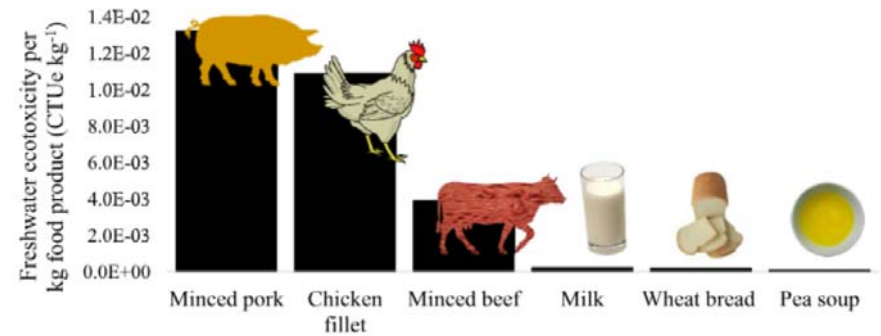
CARBON FOOTPRINT OF ORGANIC AND CONVENTIONAL FOOD



PER KG PROTEIN

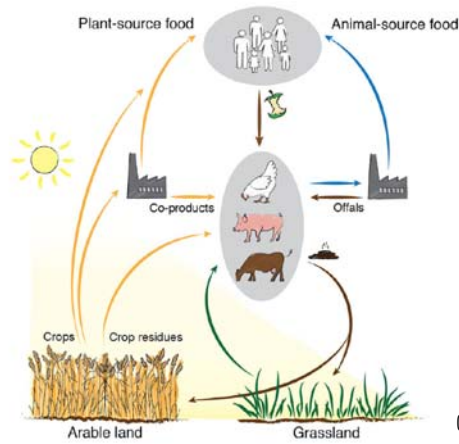


FRESHWATER ECOTOXICITY OF FOOD



(Nordborg et al. 2017)

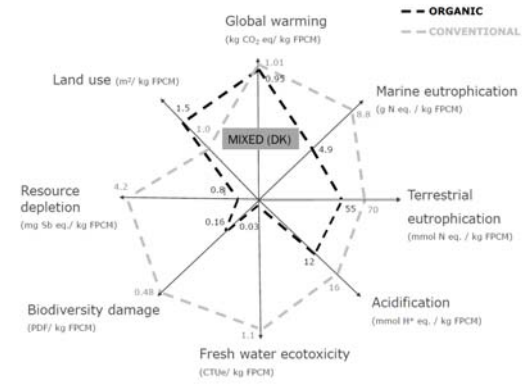
LIVESTOCKS' ROLE IN THE FOOD SYSTEM



- ❖ Converts inedible resources (waste, grass...) to food
- ❖ Maintenance of ecosystems (biodiversity)

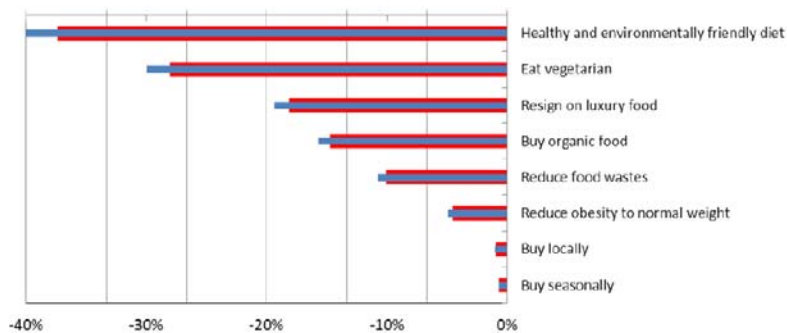
(Zanten et al. 2018)

ENVIRONMENTAL IMPACT OF MILK



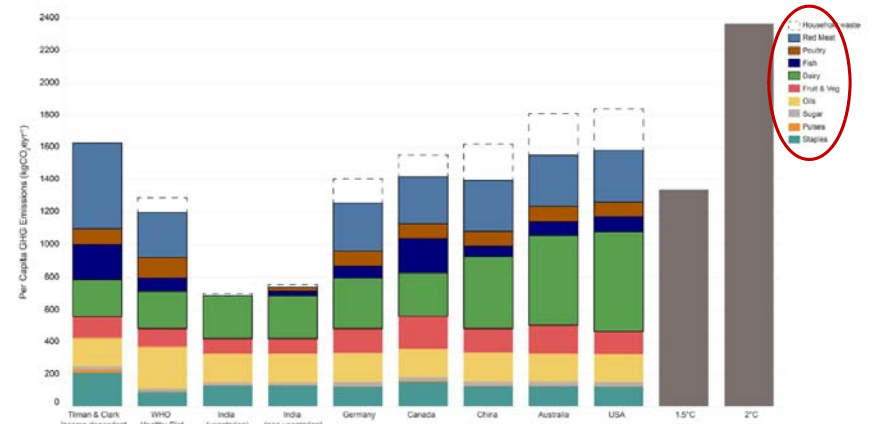
Source: Knudsen et al. 2019

HOW MUCH CAN FOOD CHOICES AFFECT ENVIRONMENTAL IMPACT?



(Jungbluth 2012)

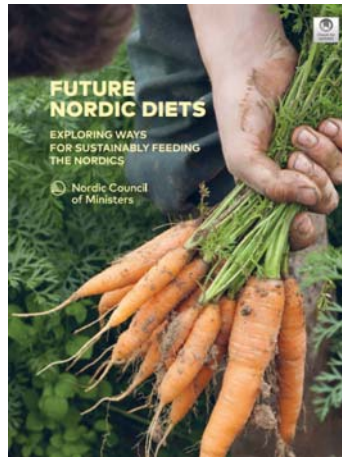
FOOD CHOICE MATTERS!



	Normative decisions
Food consumption oriented	Future diets should be based on the type of food currently consumed and seek to fulfill Nordic nutrient recommendations. Food waste should be reduced compared to current levels.
	Future diets should facilitate equitable consumption based on local resources.
	Food should be produced locally, but food not possible* to produce locally should be imported.
	The food should be produced in an organic farming system acknowledging agroecological principles.
Production oriented	More durable breeds of grazing animals should be used to be able to graze in rough terrain.
	Some land currently used for annual cropping is unsuited for this and should be left for nature conservation.
	Semi-natural pastures should be grazed by livestock to promote biodiversity and preserve the cultural landscape.
	Arable land should primarily be used to grow food for humans, not livestock feed or bioenergy crops.
Resource use oriented	By-products from food production should be used to feed livestock.
	Agriculture should be self-sufficient in renewable energy, but should not provide energy for other parts of society.

A FOOD VISION FROM SWEDEN

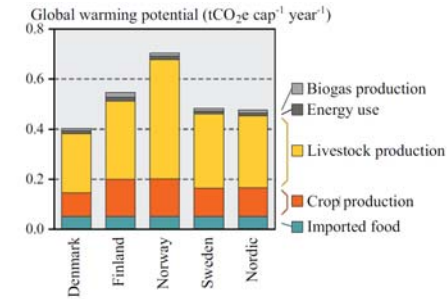
(Karlsson et al. 2018)



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A FOOD VISION FROM SWEDEN

(Karlsson et al. 2018)



- ❖ Substantial reduction in meat consumption
- ❖ Fulfills the Paris agreement

5 MARCH 2019 | MARE TRYDEMAN KNUDSEN RESEARCHER



CONCLUSION

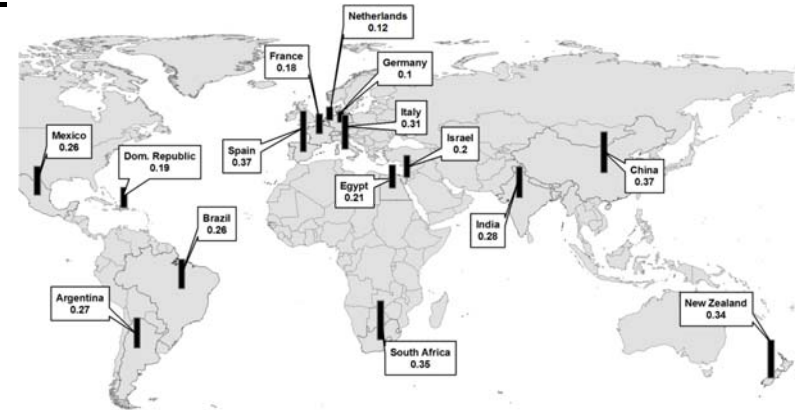
- A focus on food and climate is urgently needed
- BUT we'll have to look at both production AND consumption of food
- AND optimize both according to climate, biodiversity, eutrophication and animal welfare



EAT-LANCET DIET

	Macronutrient intake grams per day (possible range)	Caloric intake kcal per day
Whole grains Rice, wheat, corn and other	232	811
Tubers or starchy vegetables Potatoes and cassava	50 (0-100)	39
Vegetables All vegetables	300 (200-600)	78
Fruits All fruits	200 (100-300)	126
Dairy foods Whole milk or equivalents	250 (0-500)	153
Protein sources		
Beef, lamb and pork	14 (0-28)	30
Chicken and other poultry	29 (0-58)	62
Eggs	13 (0-25)	19
Fish	28 (0-100)	40
Legumes	75 (0-100)	284
Nuts	50 (0-75)	291
Added fats		
Unsaturated oils	40 (20-80)	354
Saturated oils	11.8 (0-11.8)	96
Added sugars		
All sugars	31 (0-31)	120

HOW MUCH DOES TRANSPORT MEAN?



WHAT IS A LIFE CYCLE ASSESSMENT?

