Dietary Choices for Health and Environment: the NEXUS project

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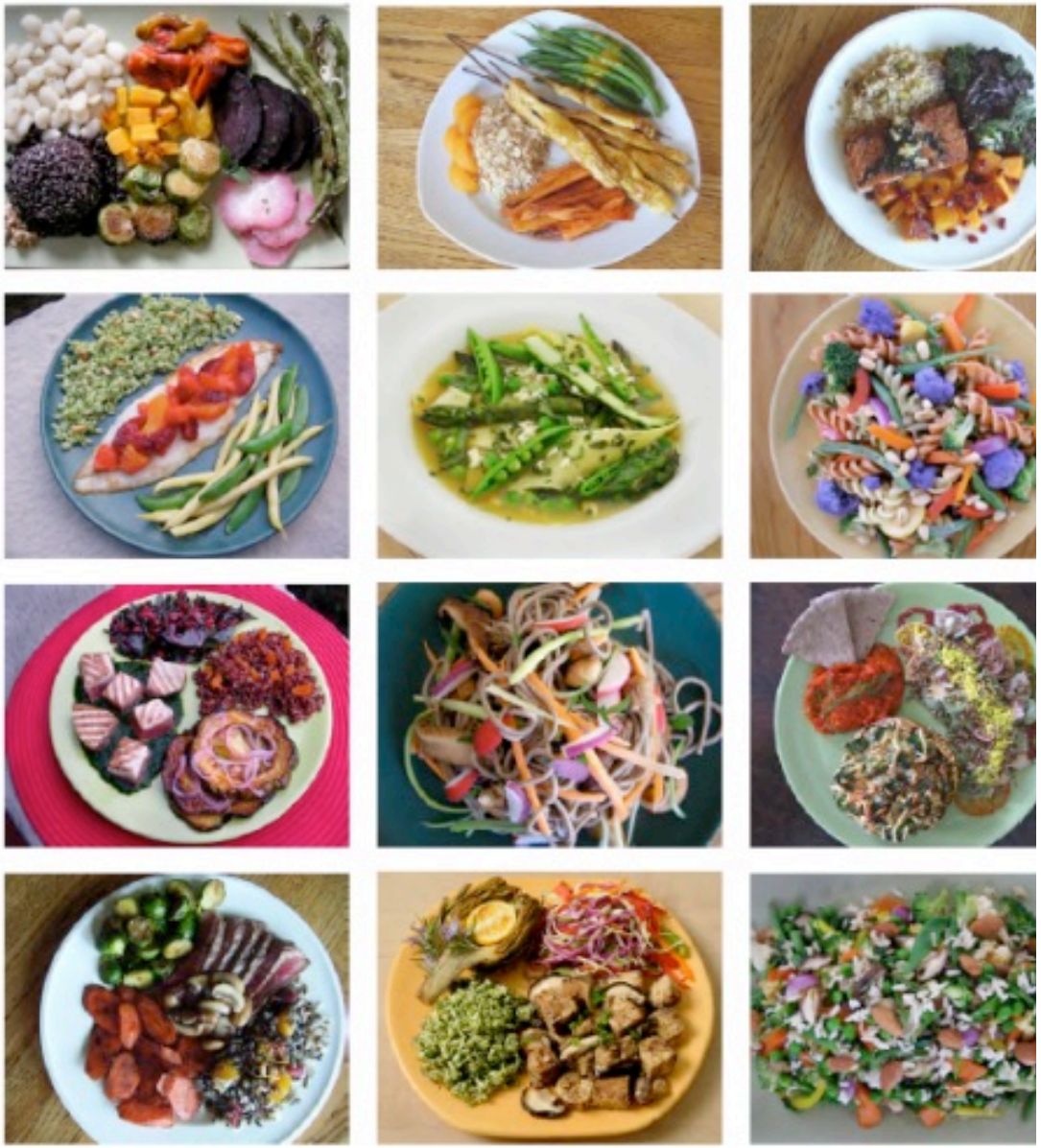
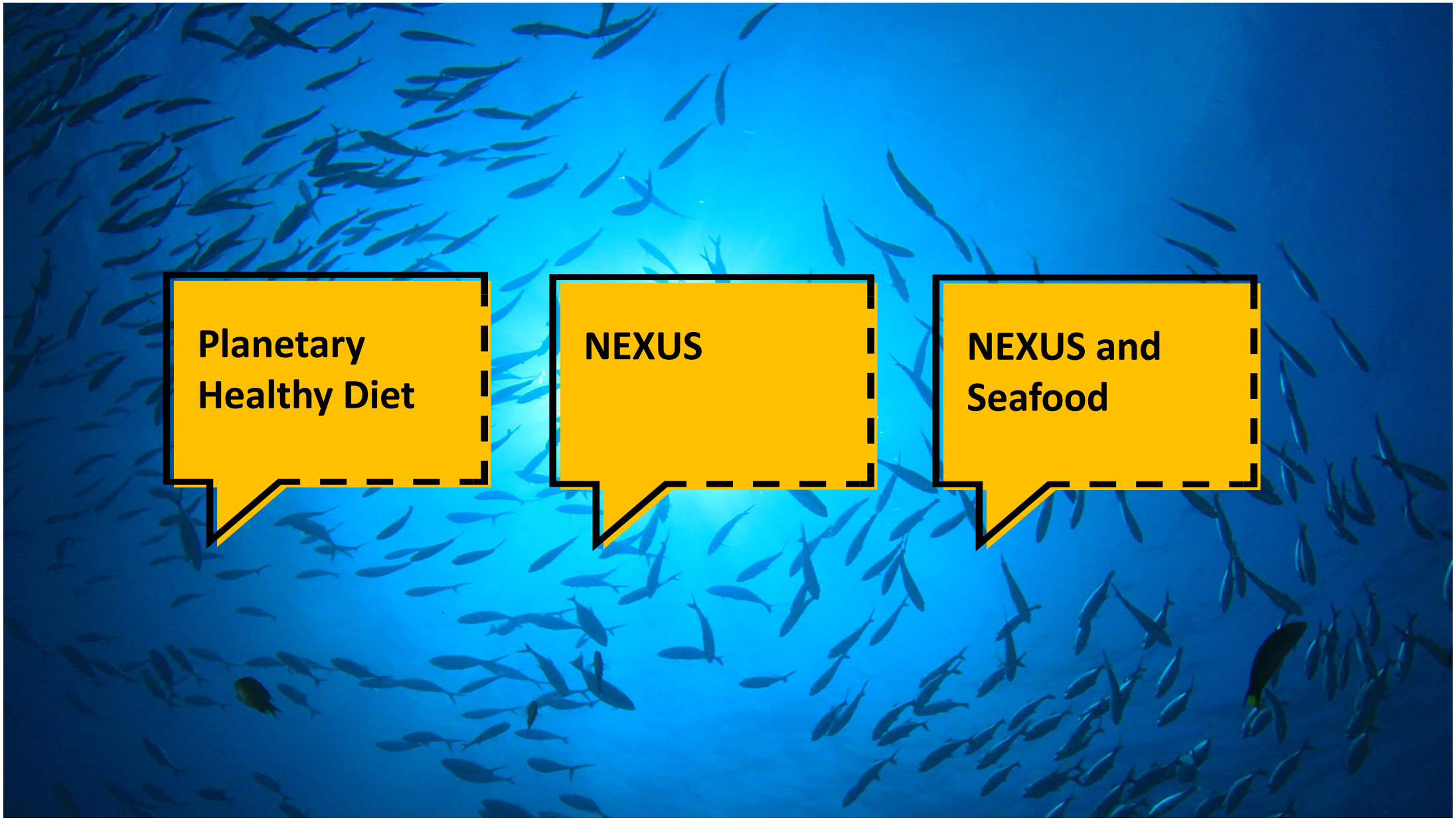
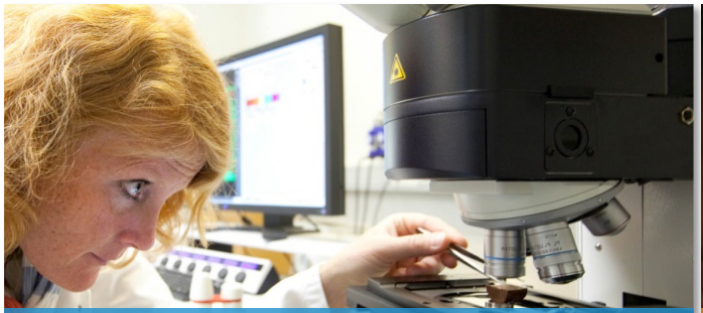



Planetary Healthy Diet
NEXUS
NEXUS and Seafood

RISE Agrifood and Bioscience


Produktdesign och perception

Process- och miljöteknik

Mikrobiologi och hygien

Miljö och hållbara livsmedelskedjor

Jordbruk och trädgård

Affärs- och företagsutveckling

Global food challenges

1. Secure food supply for a growing population
2. Improve nutrition and public health
3. Decrease impacts and resources use from food production

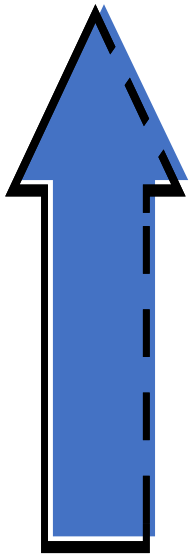
The Nutrition Transition will lead to

England

Mali

http://thoughtcatalog.com/madison-moore/2013/05/15-photos-of-a-week-of-groceries-from-different-countries-around-the-world/

..less balanced and less environmentally sustainable diets in 2050



Total Calories

Total and Animal Protein

Meat and Fish

Sweets and snacks

Increase in Obesity and NCD

Up to + 80% GHG

Tilman & Clark, 2014

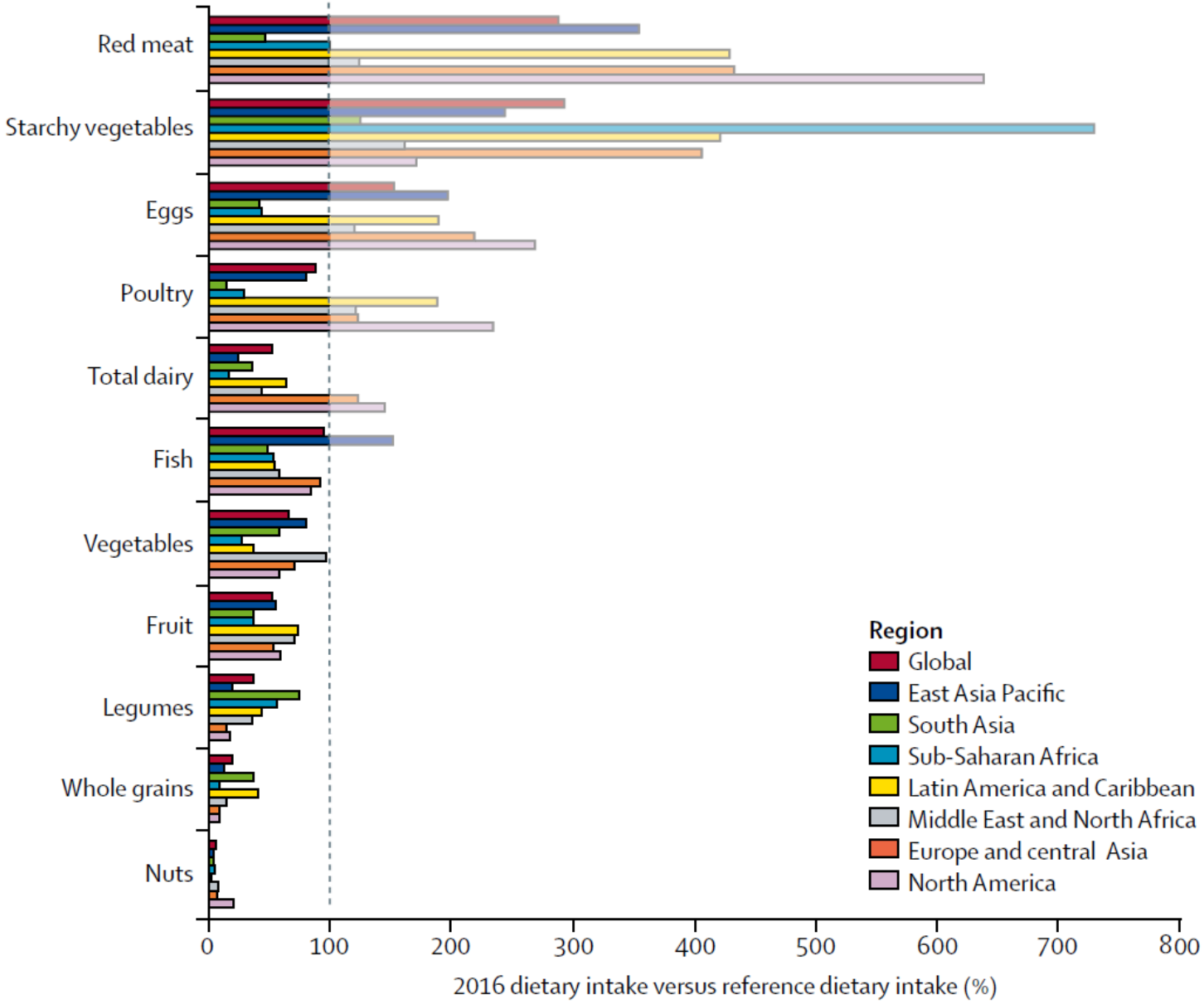
Planetary Healthy Diet

"A flexitarian diet, which is largely plant-based but can optionally include modest amounts of fish, meat and dairy foods."

EAT-Lancet Commission, 2019

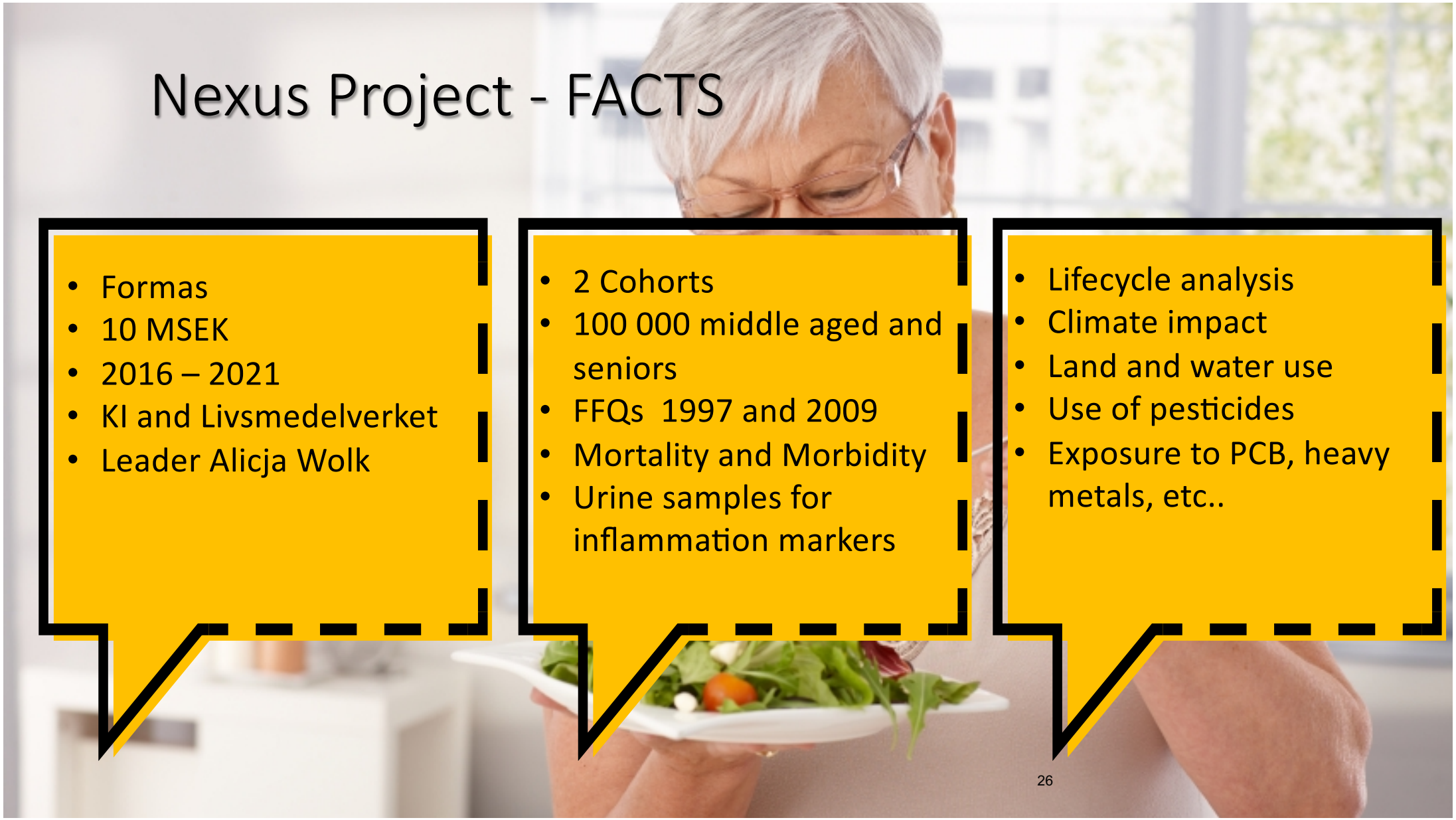
	Macronutrient intake grams per day (possible range)
Whole grains	
Rice, wheat, corn and other	232
Tubers or starchy vegetables	
Potatoes and cassava	50 (0–100)
Vegetables	
All vegetables	300 (200–600)
Fruits	
All fruits	200 (100–300)
Dairy foods	
Whole milk or equivalents	250 (0–500)
Protein sources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

Only East Asia Pacific eats fish according to the Planetary Diet



NEXUS
Environment Food and
Health Nexus

Nexus Project - FACTS



- Formas
- 10 MSEK
- 2016 – 2021
- KI and Livsmedelverket
- Leader Alicja Wolk

- 2 Cohorts
- 100 000 middle aged and seniors
- FFQs 1997 and 2009
- Mortality and Morbidity
- Urine samples for inflammation markers

- Lifecycle analysis
- Climate impact
- Land and water use
- Use of pesticides
- Exposure to PCB, heavy metals, etc..

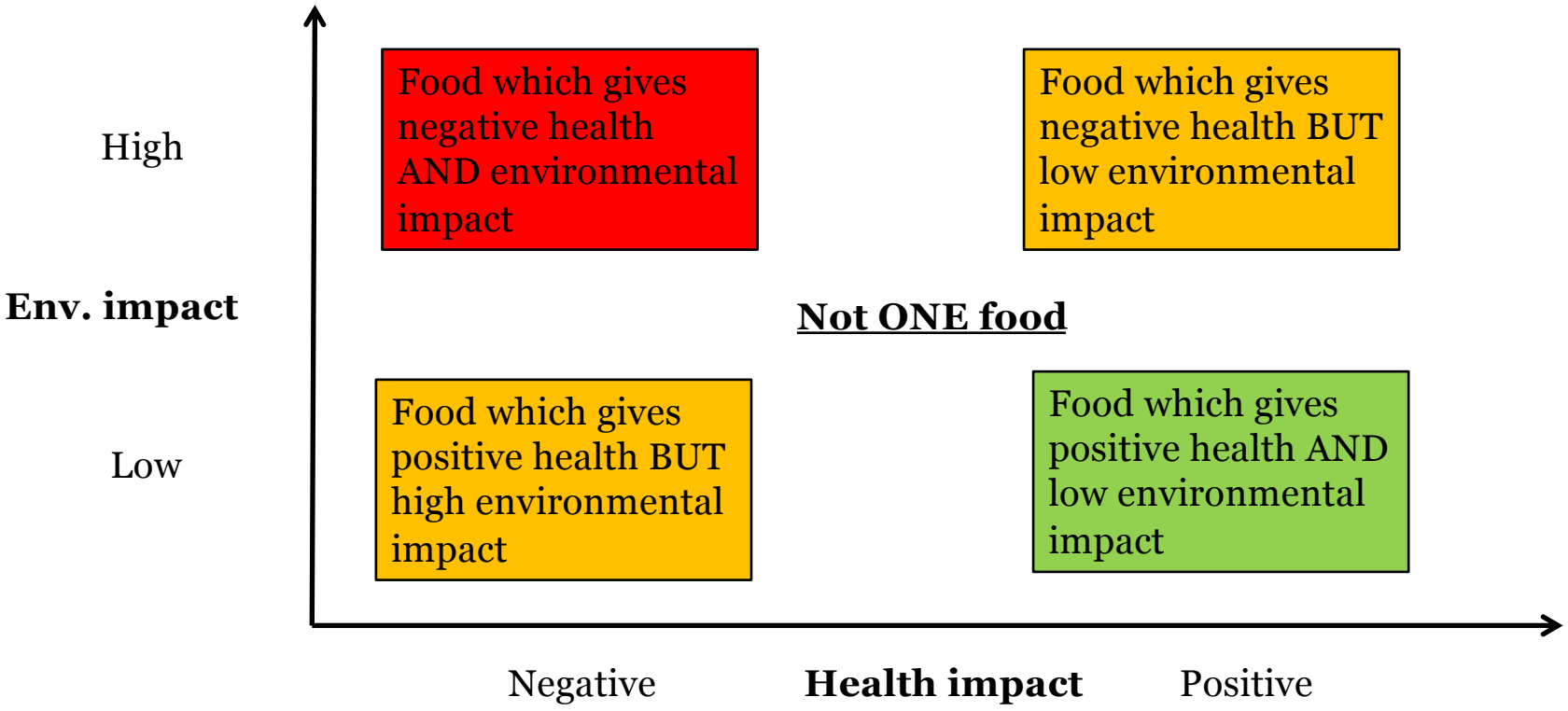
Develop knowledge on the relationships between healthy diets/foods and environmental friendly diets/foods

1. Diet /Food consumption – Health Perspective

2. Diet /Food production – Environment Perspective

3. Improved environment-adapted diet – Combined Health and Environment Perspective

Mapping foods and diets according to health and sustainability



Nexus and seafood

Next Steps

- 37 species analyzed for GHGs and Nutrition Quality representative of Swedish fish consumption (Synthes project)
- Enter climate data in food consumption data in NEXUS cohorts
- Enlarge LCA dataset including a higher number of species (based on consumption data in the studied population), systems boundaries up to consumer, and finished and prepared products
- Analyse the associations between high/low seafood consumption, environmental impact, and health outcomes

Hallström et al, submitted

Thank you!

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