



Innovations for a future-oriented consumption and animal production NOVAnimal

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SWISS NATIONAL SCIENCE FOUNDATION



Healthy Nutrition and Sustainable Food Production
National Research Programme NRP 69

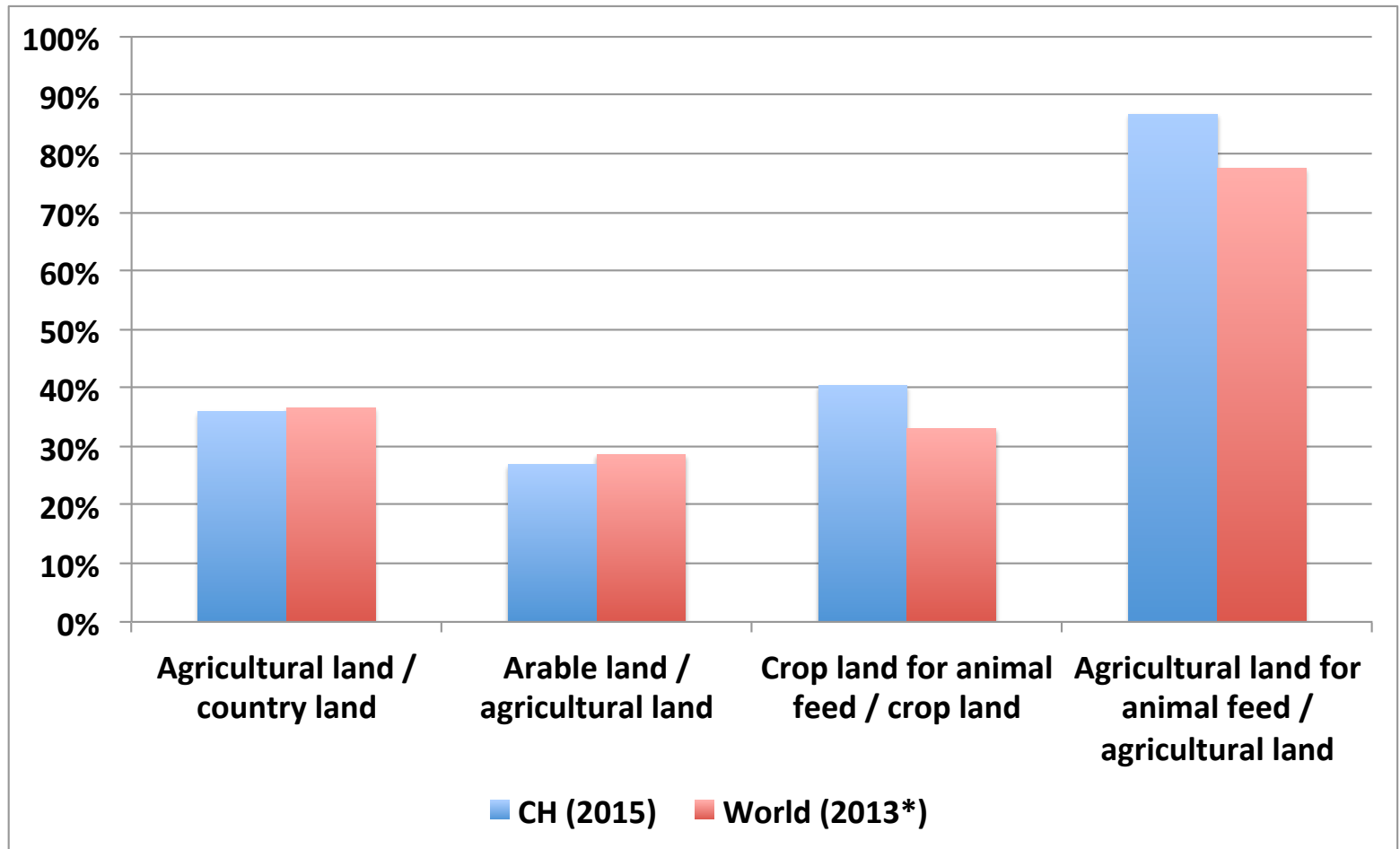


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1. Global context and national challenges

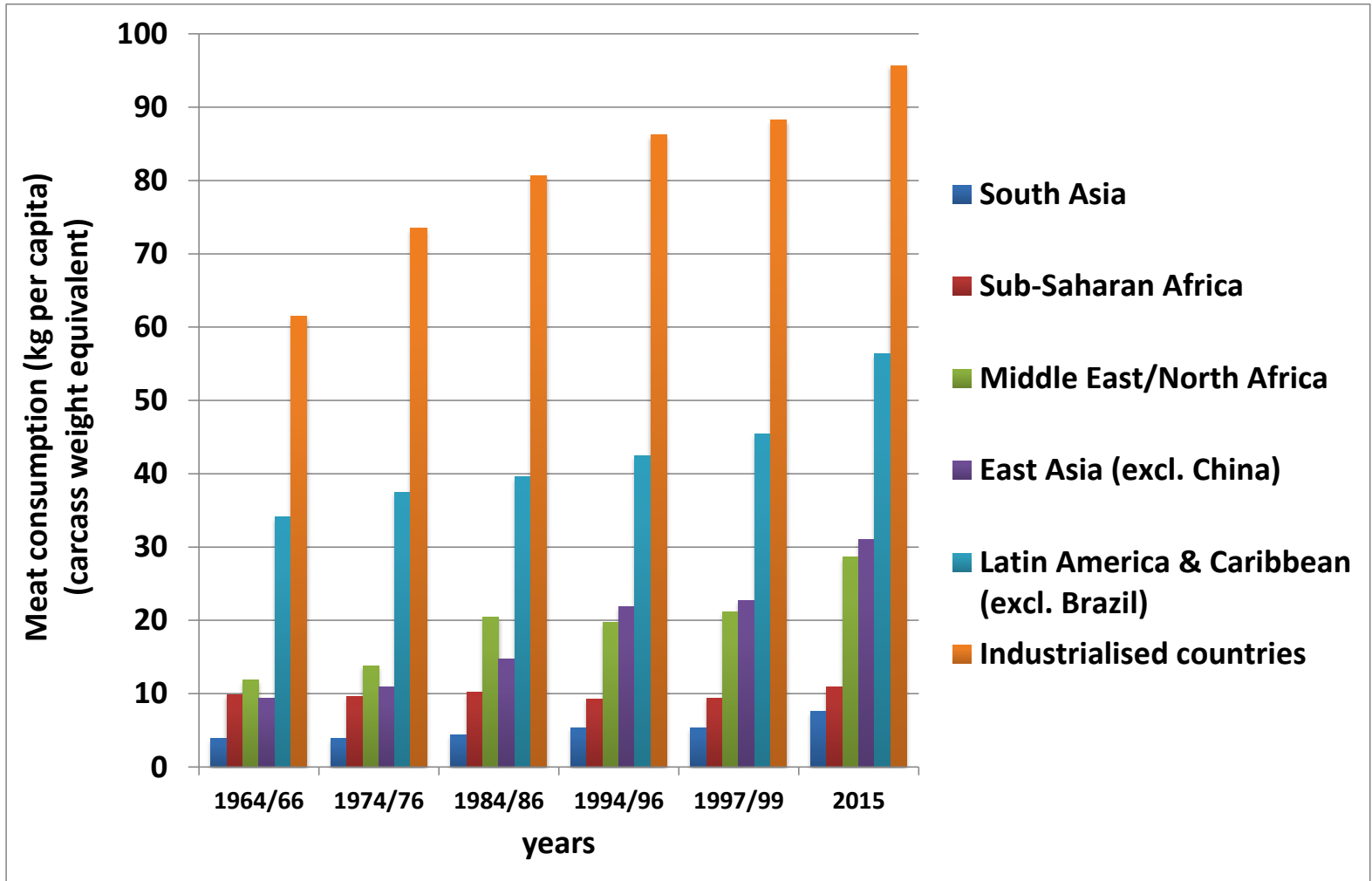
Nutrition and natural resource use: e.g. land use for animal feed



Sources: CH 2015: Swiss Federal Statistical Office.

World 2013*: FAOSTAT (2013); crop land for animal feed (FAO 2012).

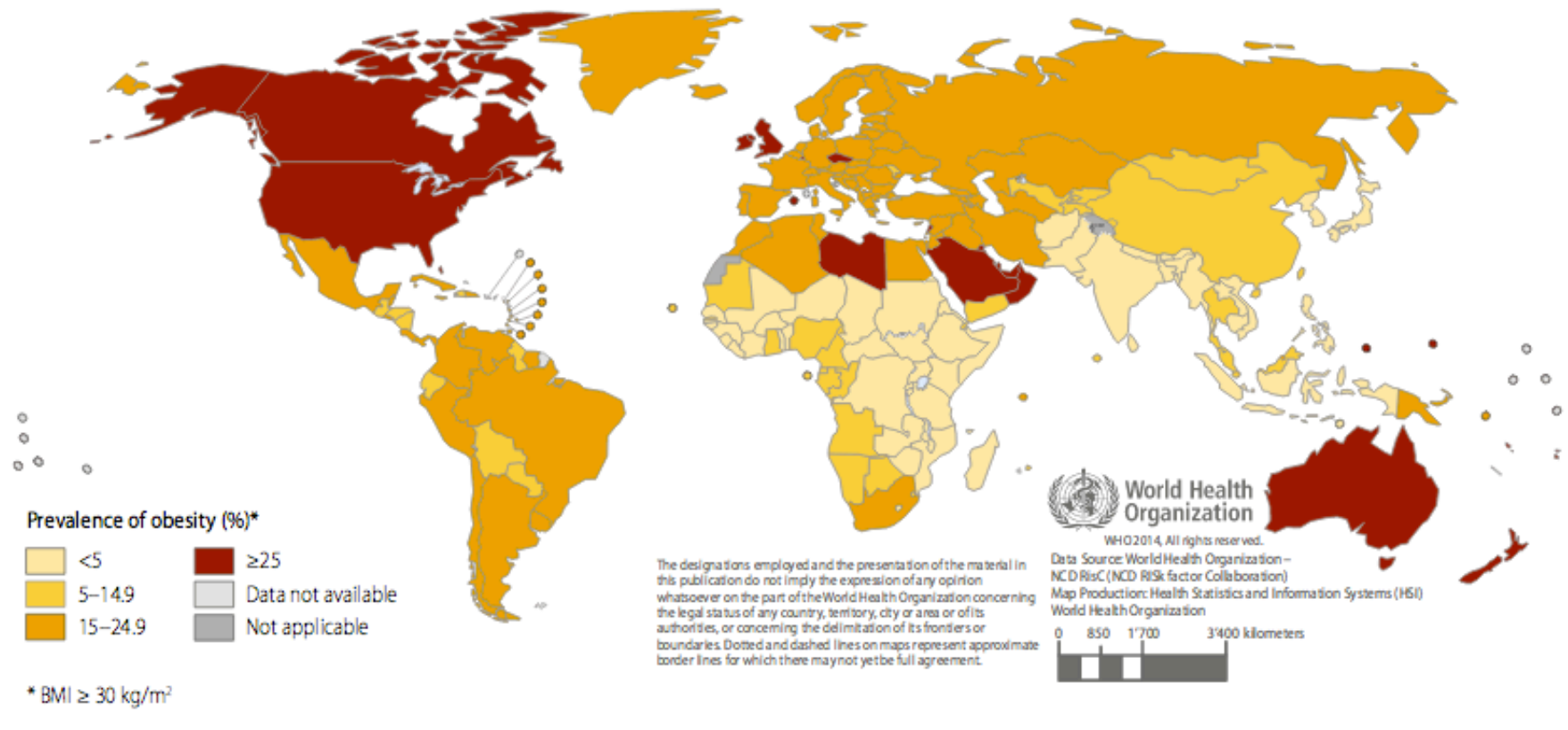
Per capita consumption of meat: continuous rise with regional differences



Source: <http://www.fao.org>

Nutrition and public health: e.g. regional differences of obesity in men

Fig. 7.1 Age-standardized prevalence of obesity in men aged 18 years and over (BMI ≥ 30 kg/m²), 2014



Source: WHO. 2014. Global Status Report on noncommunicable diseases.

Swiss food culture centres around dairy and meat



Source: Priska Baur (idea), Daniel Burkhard (realisation) (2015)

2. Research questions and objectives



Research questions

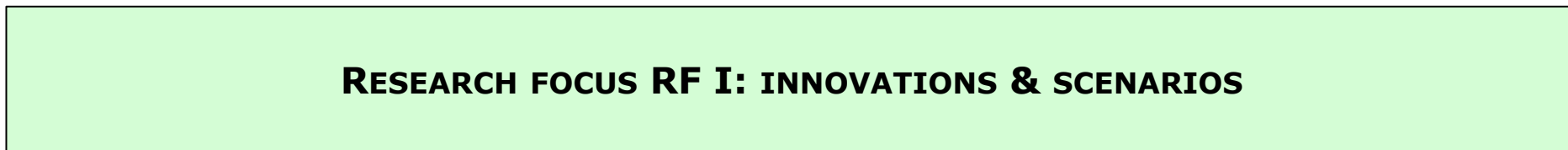
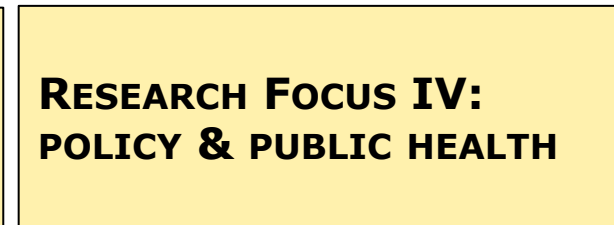
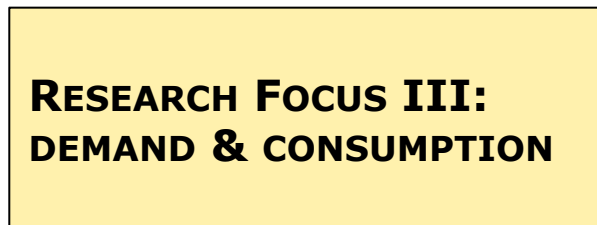
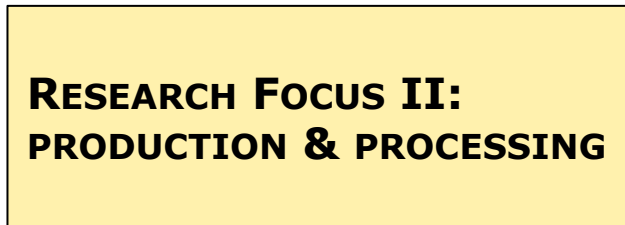
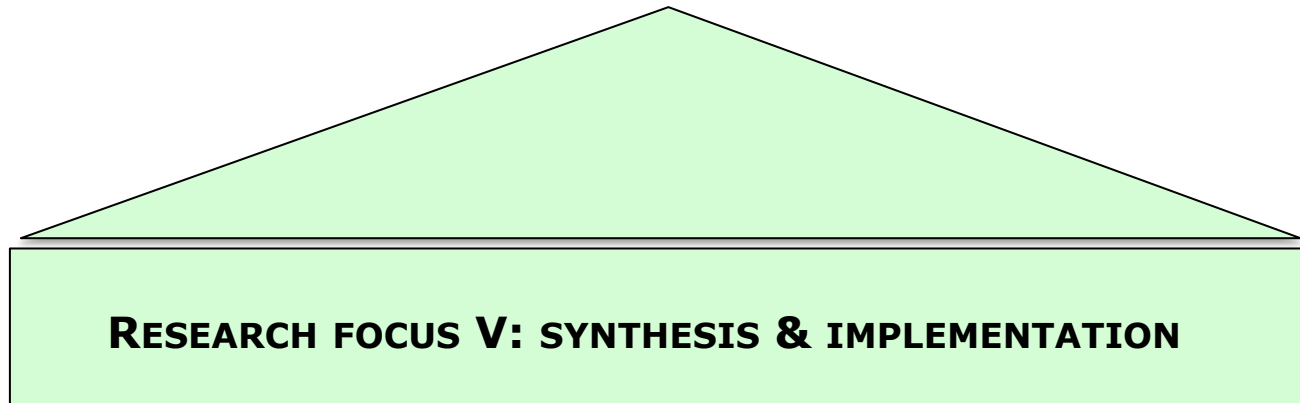
Which **innovations** along the **animal product** value chains contribute to decreasing the detrimental impacts on the environment and on public health, and how can their implementation be fostered?

Objectives

- Reduce the **per capita** natural resource use of nutrition
- Reduce negative impacts of nutrition on **public** health

3. Project organisation

Five research foci



Thirteen work packages (WP)

RF V: SYNTHESIS & IMPLEMENTATION

WP V.1: Strategies & recommendations

WP V.2: Communication & dissemination activities

RF II: PRODUCTION & PROCESSING

- WP II.1:** LCAs
- WP II.2:** Cost analysis
- WP III.3:** Menus & costs

RF III: DEMAND & CONSUMPTION

- WP III.1:** Menu choice
- WP III.2:** Menu offer
- WP III.3:** Vocat. education

RF IV: POLICY & PUBLIC HEALTH

- WP IV.1:** Policy analysis
- WP IV.2:** Public health
- WP IV.3:** Policy making

RESEARCH FOCUS RF I: INNOVATIONS & SCENARIOS

- WP I.1:** Determining innovations & building scenarios for animal product chains
- WP I.2:** Simulation model & scenario analysis

Seven research institutions

Zürcher Hochschule
für Angewandte Wissenschaften



**Life Sciences und
Facility Management**

**IUNR Institut für Umwelt und
Natürliche Ressourcen**



**University of Applied Sciences and Arts Northwestern Switzerland
School of Life Sciences**

ccrs | Center for Corporate Responsibility
and Sustainability
at the University of Zurich



**Universität
Zürich** ^{UZH}

**Epidemiology, Biostatistics
and Prevention Institute**



**Universität
Zürich** ^{UZH}



**Bern University
of Applied Sciences**



**Forschungsinstitut für biologischen Landbau
Institut de recherche de l'agriculture biologique
Research Institute of Organic Agriculture**

EXCELLENCE FOR SUSTAINABILITY

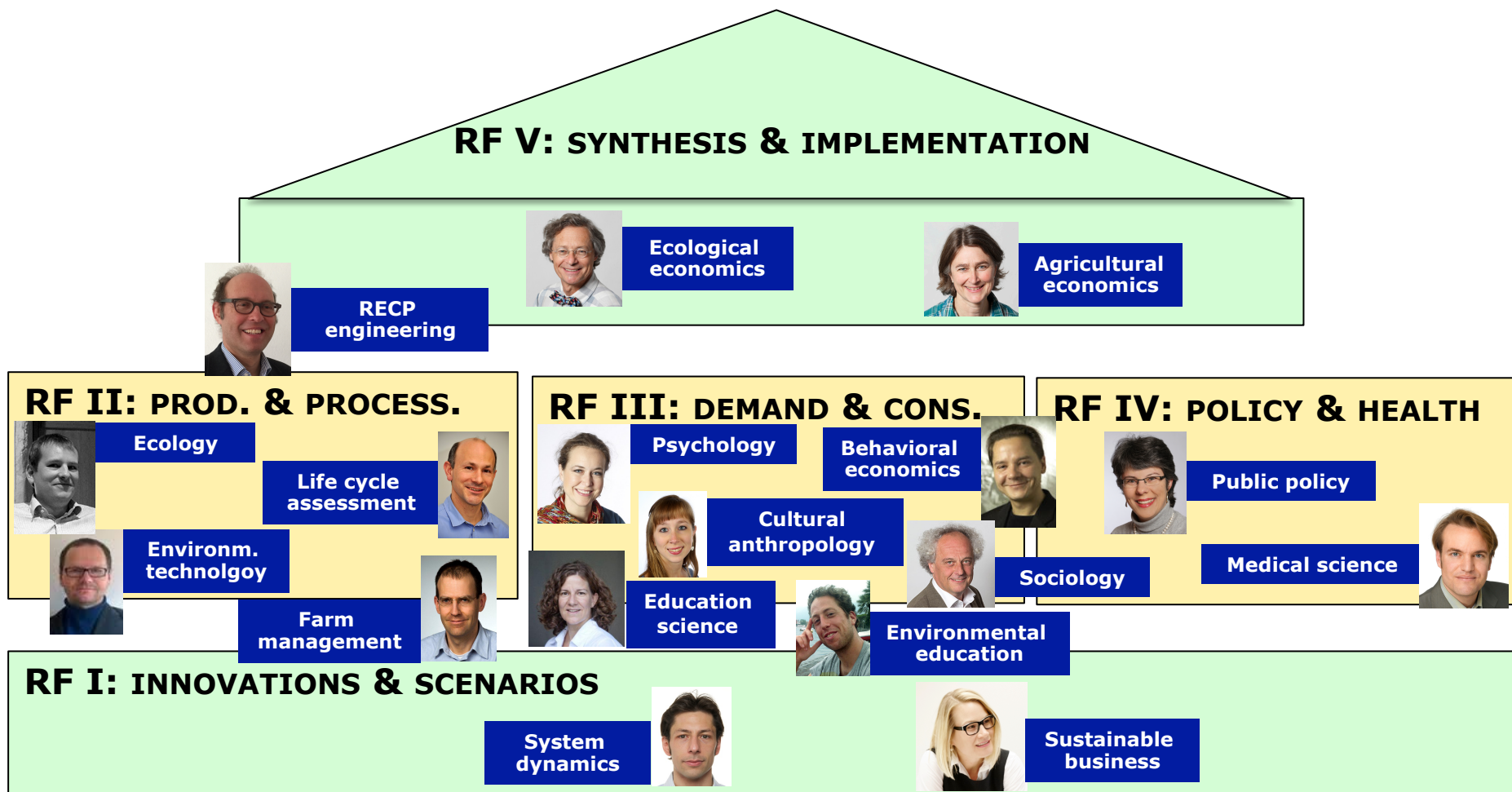
Agroscope



**Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra**

4. People and skills

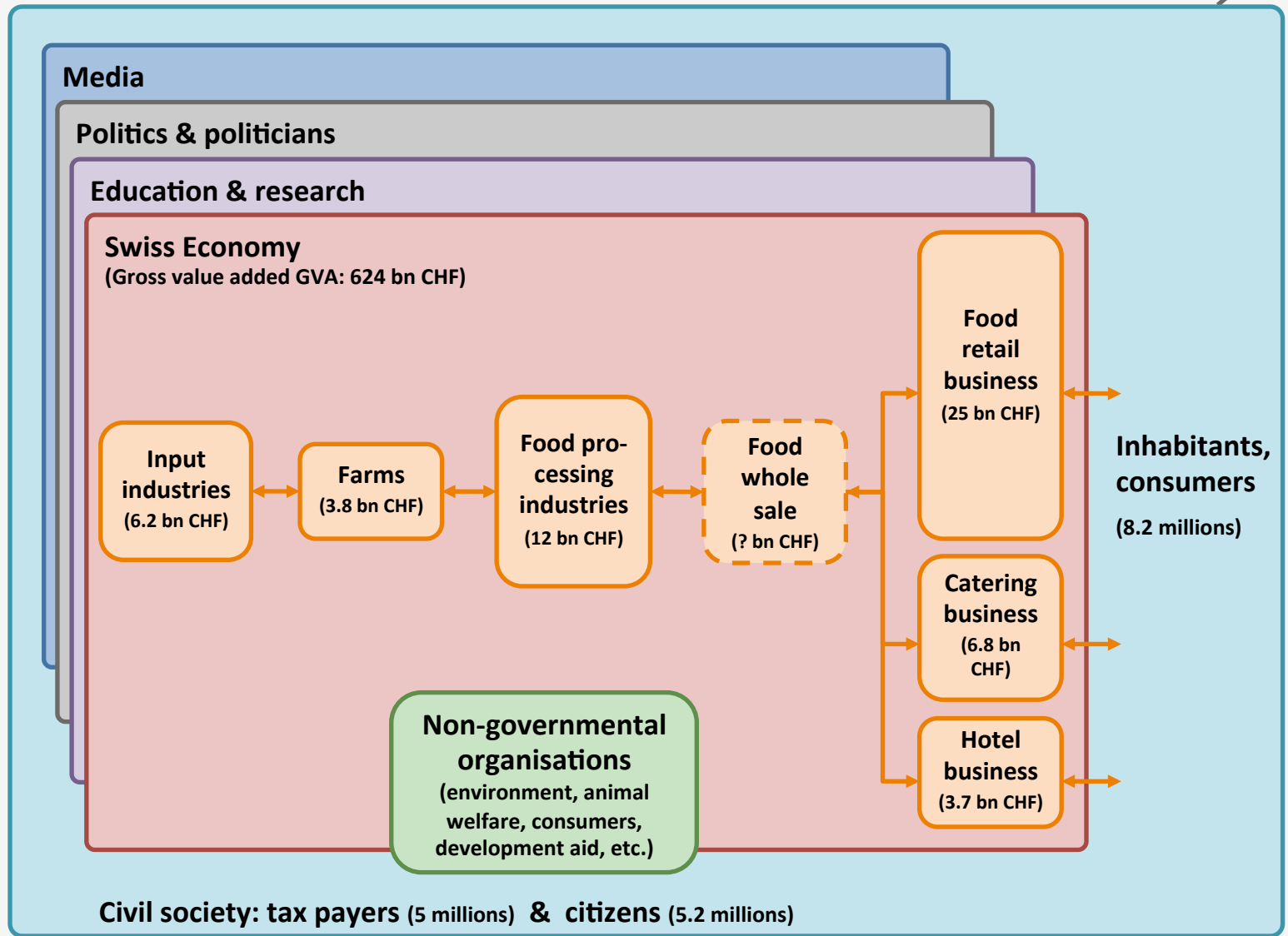
Multidisciplinary team



5. Conceptualisation of innovations and scenarios

Public health

Animal product value chains as
an integrated innovation system



Source data (gross value added): Swiss Federal Statistical Office (2014)

Environment

Technology – behaviour scenario matrix

16 technology – behaviour scenarios associated with different per capita resource use (p.c.RU)

Resource use per kg animal product (technology)	p.c. animal products consumption (behaviour)			
	↗	→	↘	↘↘
↗	Scenario 1.1: p.c.RU ↗↗	Scenario 1.2: p.c.RU ↗	Scenario 1.3: p.c.RU →?	Scenario 1.4: p.c.RU ↘?
→	Scenario 2.1: p.c.RU: ↗	Scenario 2.2: p.c.RU →	Scenario 2.3: p.c.RU ↘	Scenario 2.4: p.c.RU ↘↘
↘	Scenario 3.1: p.c.RU: →?	Scenario 3.2: p.c.RU ↘	Scenario 3.3: p.c.RU ↘↘	Scenario 3.4: p.c.RU ↘↘↘
↘↘	Scenario 4.1: p.c.RU: ↘?	Scenario 4.2: p.c.RU ↘↘	Scenario 4.3: p.c.RU ↘↘↘	Scenario 4.4: p.c.RU ↘↘↘↘

6. Expected results and implementation



Expected results

- Determination and prioritisation of effective **innovations**
- Identification of **drivers** of and **constraints** on innovations
- Strategies and **recommendations** for overcoming constraints and fostering implementation of innovations
- Evidence based **guidelines** and tools for the target groups



Implementation activities

- Transdisciplinary research approach
- Communication throughout the project
- Novel implementation activities

7. Positioning NOVAnimal in the NRP 69



Complementing and substantiating NRP 69

- Picking out global trends with major impacts
- Tailoring NOVAnimal to the Swiss context
- Integrating the animal product value chains
- Emphasising inter- and transdisciplinarity

8. Contribution to the NRP 69 goals



NOVAnimal contributes to answering the NRP 69 key questions

How can ...

- ... healthy and sustainable eating be encouraged in Switzerland?
- ... enough and safe food products be made available at affordable prices?
- ... the production, processing and distribution of food be managed efficiently with the least impact on the environment?



NOVAnimal contributes to a transformation of the Swiss food culture

If the dairy and meat per capita consumption declines over the coming years, Switzerland could become an interesting **role model** of how with growing income and prosperity, and knowledge and education, animal products consumption can return to an ecologically sustainable and arguably healthier level.



Thank you for your attention