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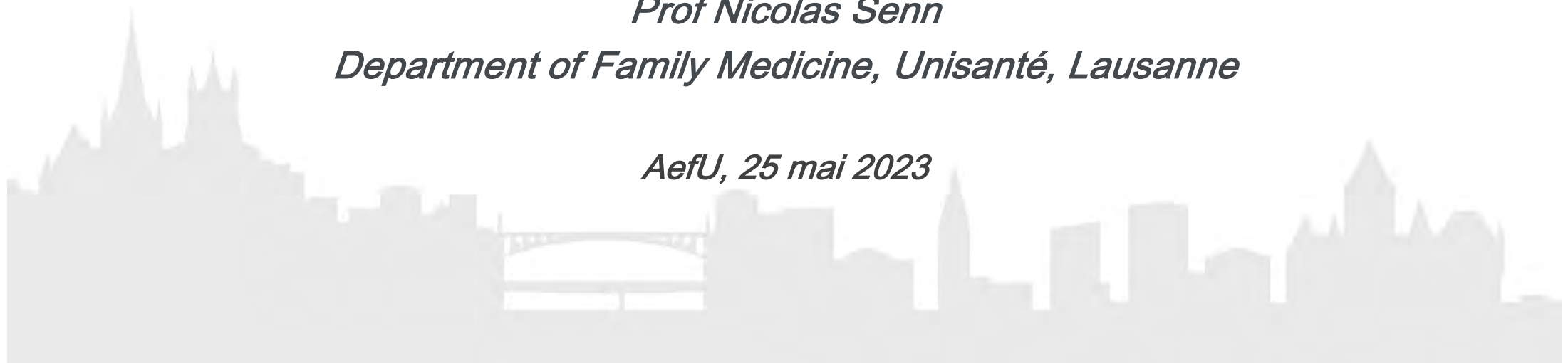
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Faculté de biologie  
et de médecine

# Socio-ecological transformation of the health system: a roadmap of the ASSM

*Prof Nicolas Senn*

*Department of Family Medicine, Unisanté, Lausanne*

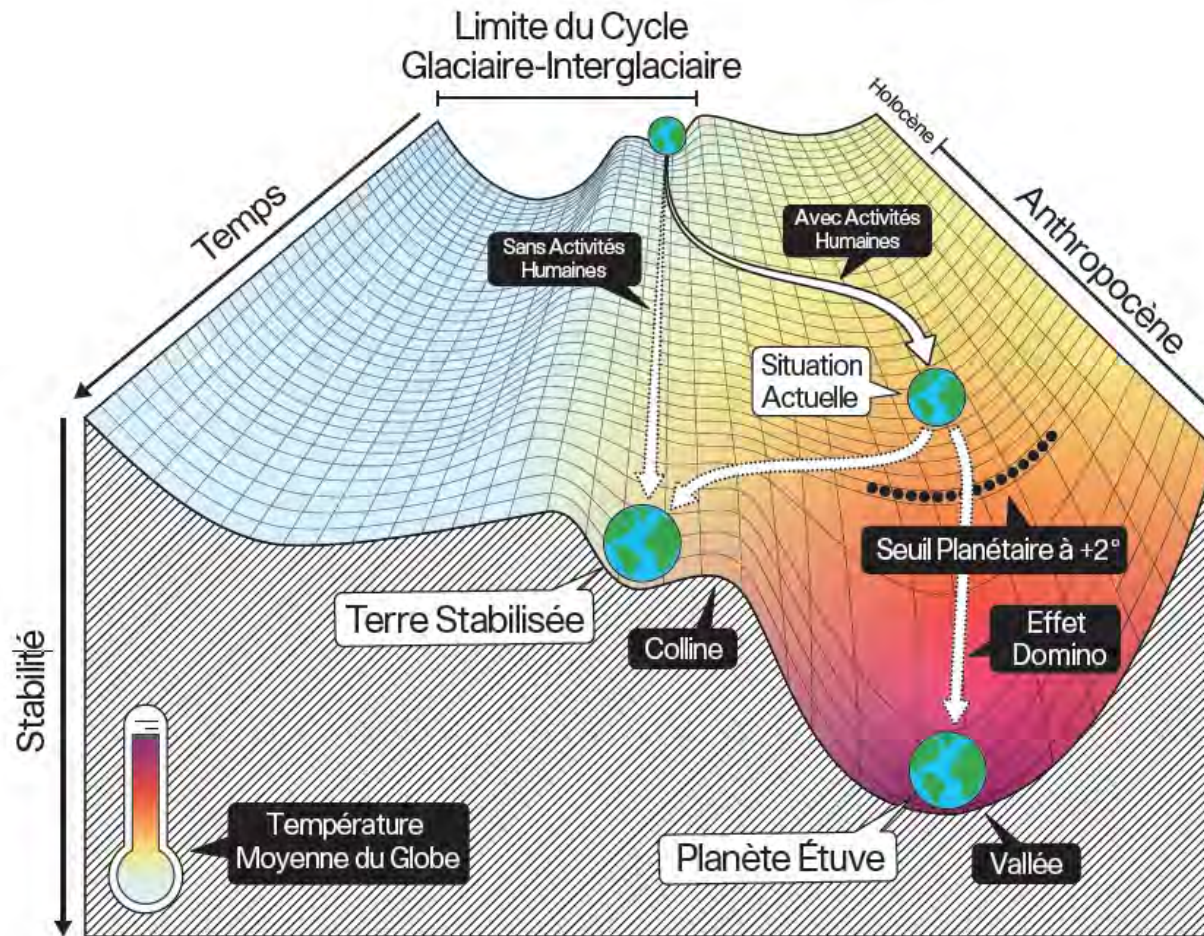
*AefU, 25 mai 2023*



# Agenda

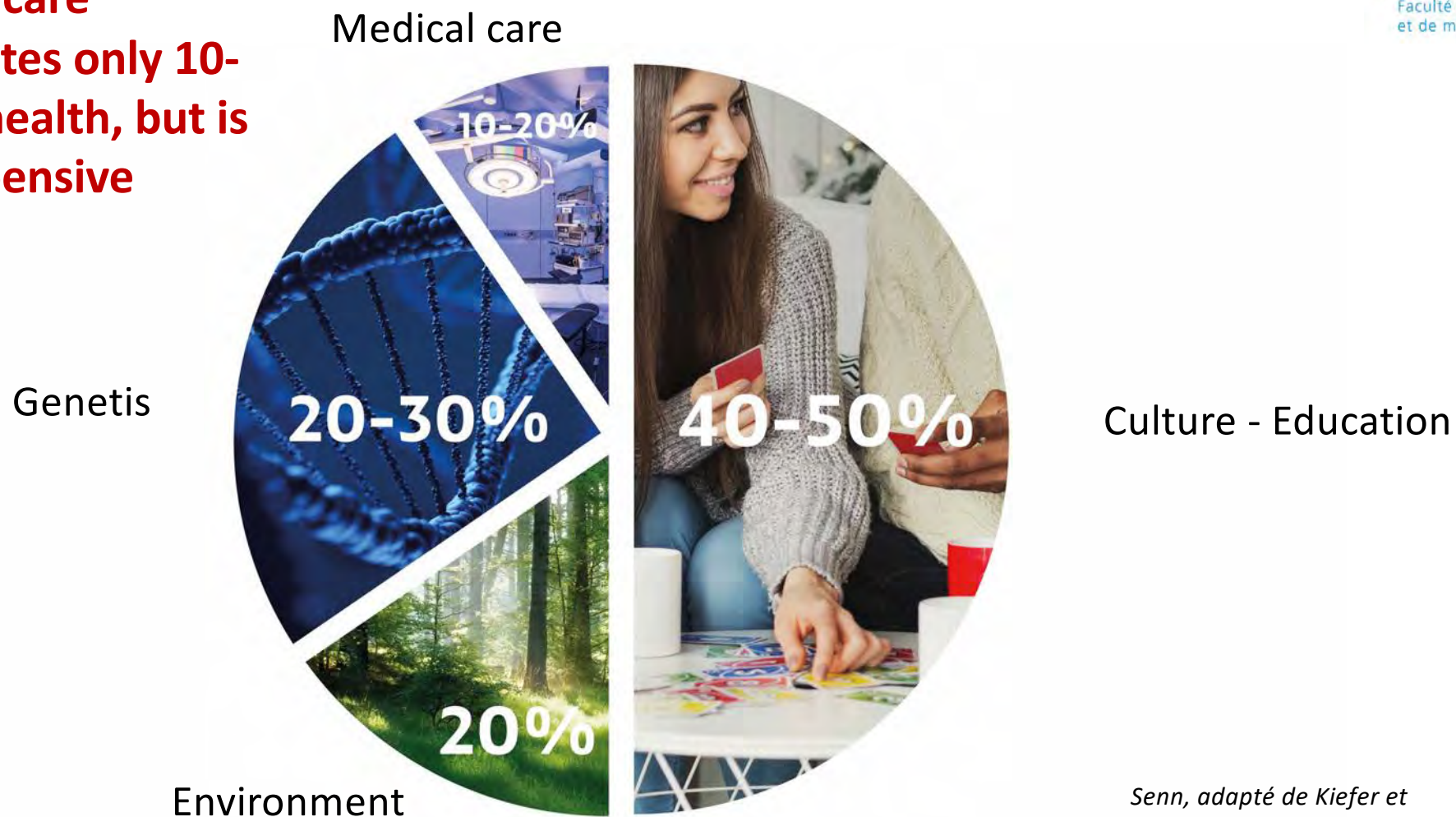
- Background on health systems and the environment
- The SAMS roadmap in seven proposals
- Conclusion

# This is a health issue



**Chapter 9** Planetary Boundaries and health - Alain Tanner et al. in Health and Environment

**Medical care  
contributes only 10-  
20% of health, but is  
very expensive**



*Senn, adapté de Kiefer et  
al, 2019)*

# Socio-ecological transformation, good for your health

Impact on mortality of pathways to net zero greenhouse gas emissions in England and Wales: a multisectoral modelling study

*James Milner, Grace Turner, Andrew Ibbetson, Patricia Eustachio Colombo, Rosemary Green, Alan D Dangour, Andy Haines, Paul Wilkinson*

**> 2 millions d'années de vie en bonne santé gagnées  
rien qu'en faisant ce qu'il faut pour la transition  
socio-écologique de la société**



# Three (four) main factors lead to the collapse of civilisations:

1. Demography
2. The complexity of the organisation of society
3. The amount of energy needed to run the system
4. Inequalities in the population

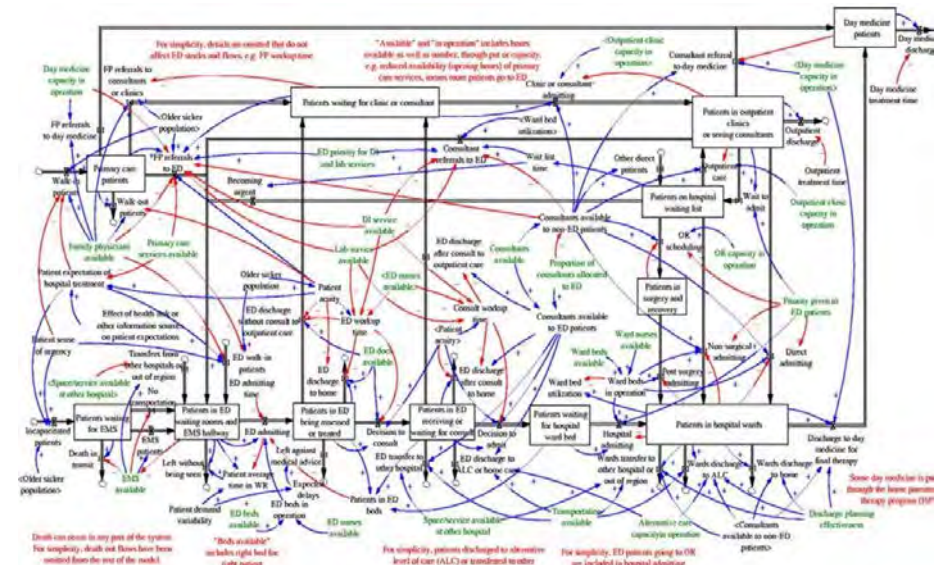
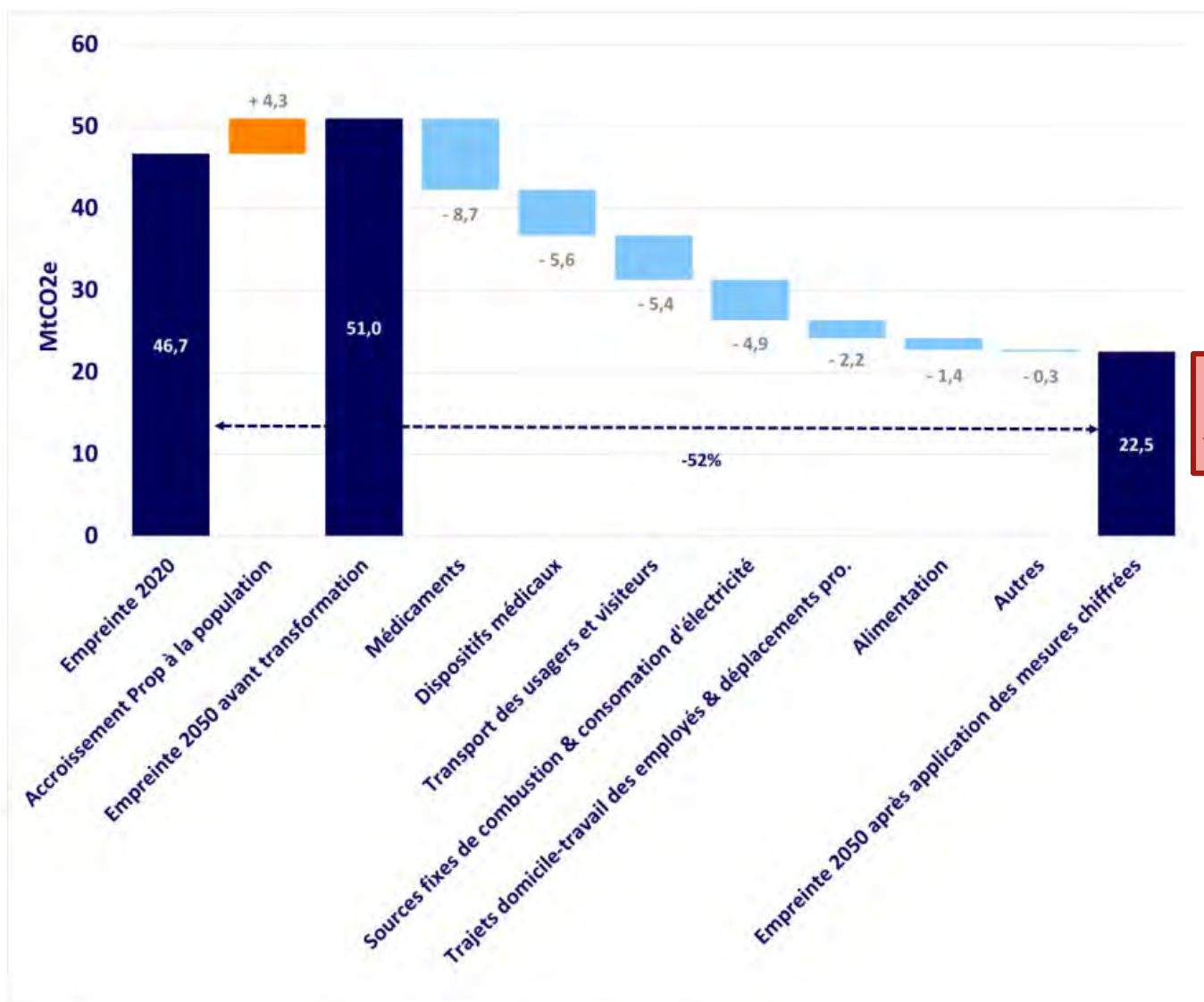


Figure 5 – Hospital as a CAS depicted through a Causal Loop Diagram, representing aspects of the dynamic complexity of the organisational interactions. A representation of a complex system. Source: Braithwaite, J. (2015). Modelling causal pathways in health services: A critique. Retrieved from



There is still a 30% reduction shortfall to meet the Paris Agreement targets...



**Reducing the use of health care, Strengthening prevention, adapting health objectives....**

Figure 33 - Émissions 2050 après application des mesures (hors prévention)

# Profound changes for health systems: an example of a roadmap in Switzerland

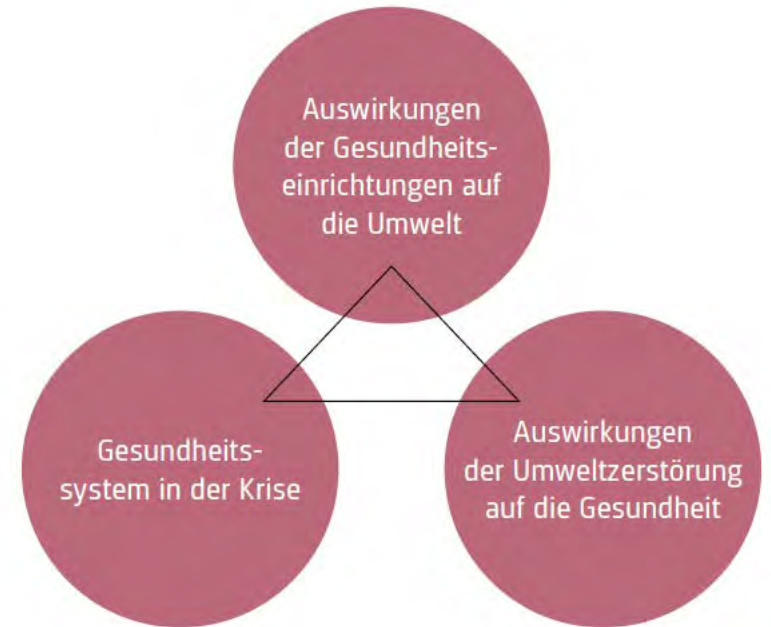


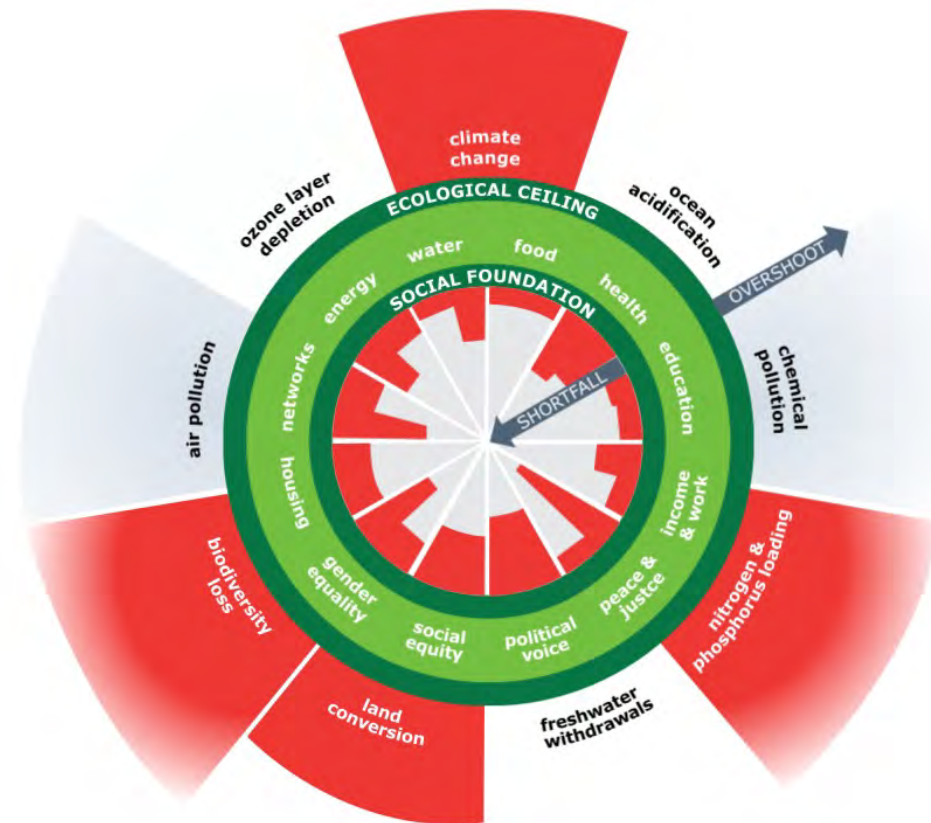
Abbildung 1: Drei Feststellungen.



# The Doughnut economic theory: planetary boundaries and social foundation

*“The Doughnut of social and planetary boundaries is a playfully serious approach to framing the Humanity’s 21st century challenge to meet the needs of all within the means of the planet. It acts as a compass for human progress this century”*

Kate Raworth



Ref:

[www.kateraworth.com/doughnut/](http://www.kateraworth.com/doughnut/)

# Approach to reflection

## Situate the level of reflection



Figure 3: Positionnement «més0» de la feuille de route: vision stratégique pour le système de santé suisse.

## Define the levels of actions

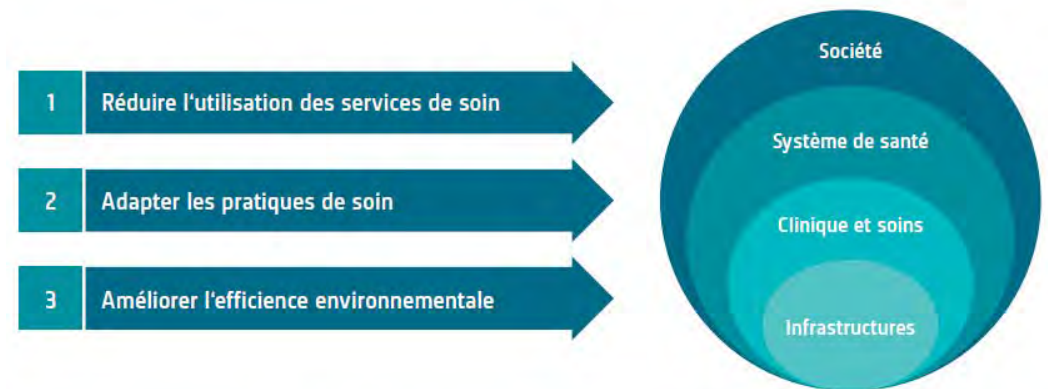


Figure 4: Stratégies d'actions se conceptualisant et s'opérationnalisant sur un continuum de différents niveaux de compétences.

60 experts in 4 workshops  
in May 2021



# Seven proposals

<b>Reducing the demand for health services</b>	<b>Proposal 1</b>	Strengthening the commitment of citizens, communities and institutions to accelerate the socio-ecological transition
	<b>Proposal 2</b>	Rethinking the definition of health by including natural environmental determinants.
	<b>Proposal 3</b>	De-(bio)medicalisation and re-socialisation of health
<b>Adapting health care practices</b>	<b>Proposal 4</b>	Developing a new paradigm for sustainable medicine and care
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<b>Improving environmental efficiency</b>	<b>Proposal 6</b>	Promoting sustainability efforts in health care institutions
<b>Transversal</b>	<b>Proposal 7</b>	Training and awareness raising of health professionals on environmental sustainability issues



Pour le climat  
Loi CO<sub>2</sub>  
13 juin 2021  
**Oui**



22.4101 INTERPELLATION

### Für ein nachhaltiges Gesundheitssystem

Eingereicht von:



**CLIVAZ CHRISTOPHE**  
Grüne Fraktion  
Grüne Partei der Schweiz

Einreichungsdatum:

29.09.2022

Eingereicht im:

Nationalrat

Stand der Beratungen:

Im Rat noch nicht behandelt

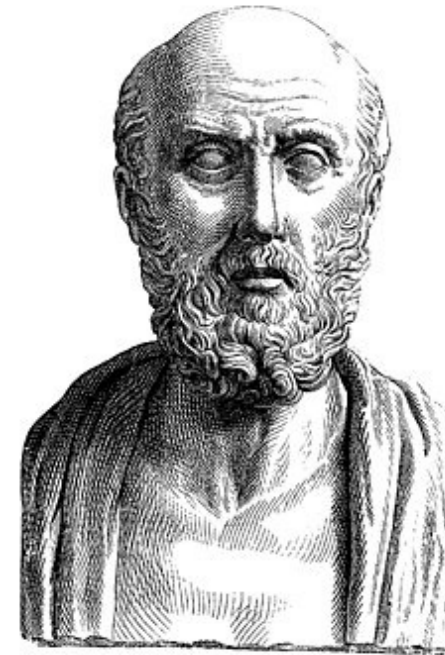
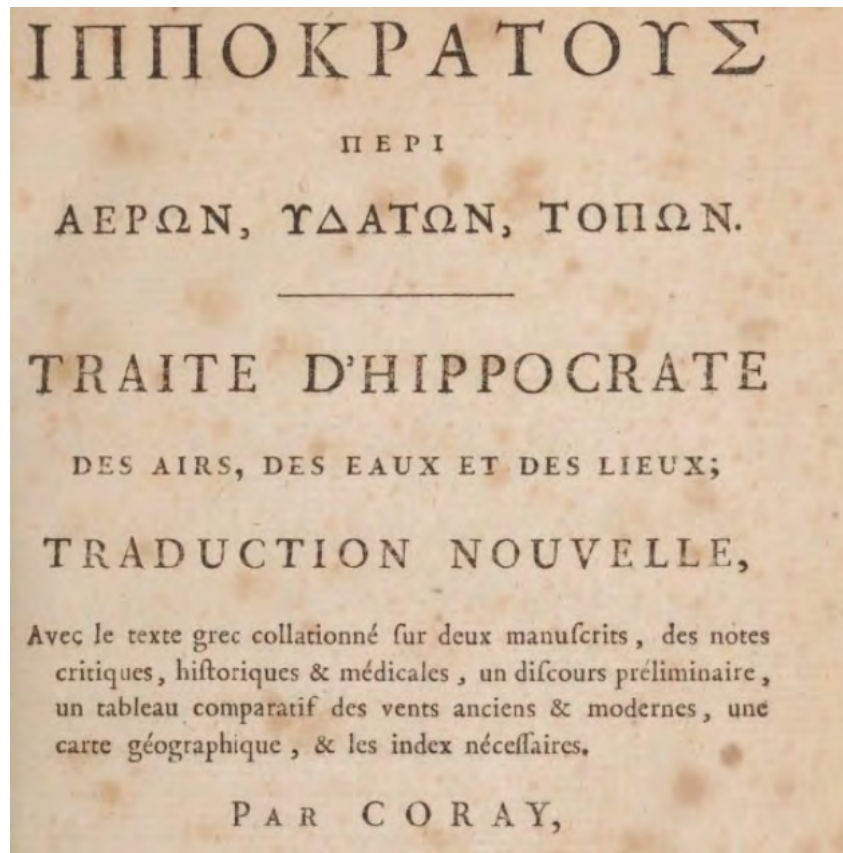
☰ ALLES ZUKLAPPEN

☶ EINGEREICHTER TEXT

# Seven proposals

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# Hippocrates, the natural elements and health (460 BC)



**Chapter 4** The history of the relationship between health, disease and environment – *Marie Gaille in Santé et Environnement*

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# De(bio)medicalising and resocialising health

Health of the future?



**Chapter 43** Towards a resocialisation of health: historical benchmarks and perspectives for a fairer health system, Stéfanie Monod et al. in *Santé et Environnement*



# Seven proposals

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# Developing "low tech, high value healthcare services"



Maison médicale antenne tournesol

Toutes les informations sur la maison médicale

à propos | la charte de la maison médicale

La charte de la maison médicale

Notre charte est une base commune, un texte mobilisateur, un projet de notre maison médicale. Non pas une description fidèle de ce que nous sommes, mais un modèle vers lequel nous sommes d'accord d'avancer et qui reste adaptable.

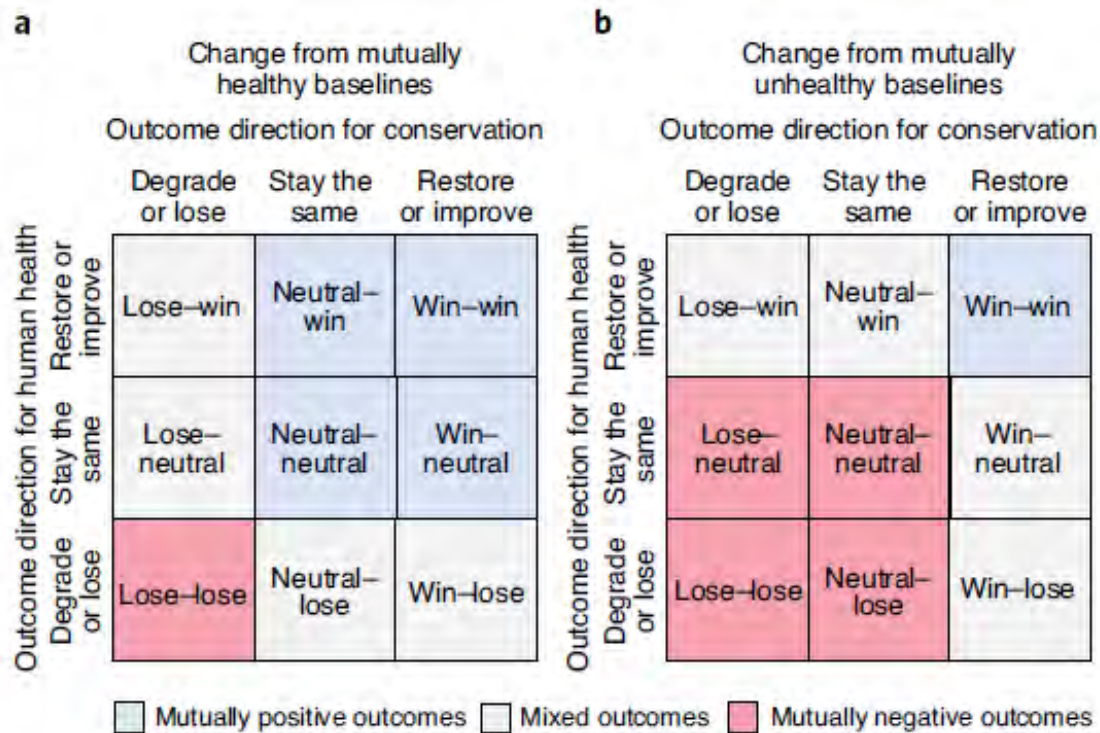
1. Historique 2. Valeurs 3. Missions 4. Moyens mis en œuvre 5. Engagement politico-philosophique



# Seven proposals

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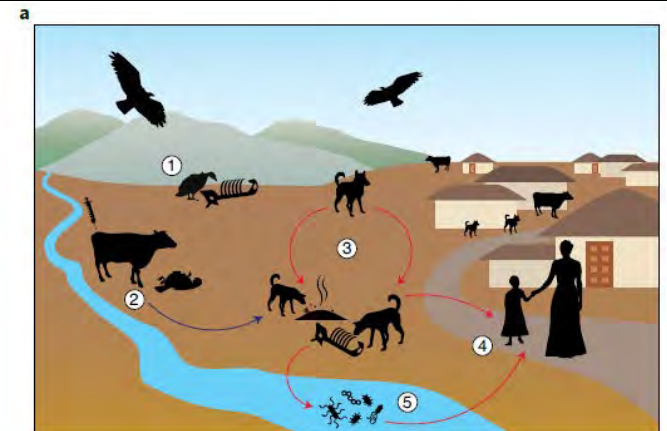
# Win-win: a very general concept



How to identify win-win interventions that benefit human health and conservation

## Exemple de Loose-loose en Inde

1. Diclofenac tue les vautours
2. Les chiens mangent les charognes
3. Augmentation des chiens
4. Plus de rage, tue les humains
5. Plus de maladies infectieuses, rendent malades les humains



# Rethinking food habits



0.3 g CO<sub>2</sub> par g de protéines



9.1 g CO<sub>2</sub> par g de protéines



62.3 g CO<sub>2</sub> par g de protéines

**Animal-based food production is generally more resource-intensive and greenhouse gas intensive than plant-based products**

Springmann, M., et al., *Options for keeping the food system within environmental limits*. Nature, 2018. **562**(7728): p. 519-525.

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en durabilité

**FIG 3**

## Comparaison de deux assiettes idéales

Assiette idéale  
selon la commission EAT-Lancet



- Fruit et légumes
- Grains complets
- Légumineuses
- Graisses insaturées
- Légumes féculents
- Produits laitiers
- Protéines animales
- Sucres ajoutés

Assiette idéale  
selon la Société suisse de nutrition

Startseite » La SSN » Liens » Donateurs

**Donateurs**

Code de conduite de la SSN

atupri  
Der Gesundheitsversicherer

DSM

EVIAN VOLVIC  
SUISSE SA

Coop

eldora  
GRUPE

Helsana  
Engagiert für das Leben.

menuandmore  
Wie E. Knebel das Gemüse auzücht

selecta

DANONE

Emmi

HUNZIKER

MIGROS

Nestlé

SSN  
SUISSE  
SWITZERLAND

# Community garden

## Effects of a community gardening intervention on diet, physical activity, and anthropometry outcomes in the USA (CAPS): an observer-blind, randomised controlled trial

*Jill S Litt\*, Katherine Alaimo\*, Kylie K Harrall, Richard F Hamman, James R Hébert, Thomas G Hurley, Jenn A Leiferman, Kaigang Li, Angel Villalobos, Eva Coringrato, Jimikaye Beck Courtney, Maya Payton, Deborah H Glueck*



Ref: [Biodiversity and Allotments: Gardening in harmony with Nature - apse](#)

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# CO<sub>2</sub> ≠ Quality of care

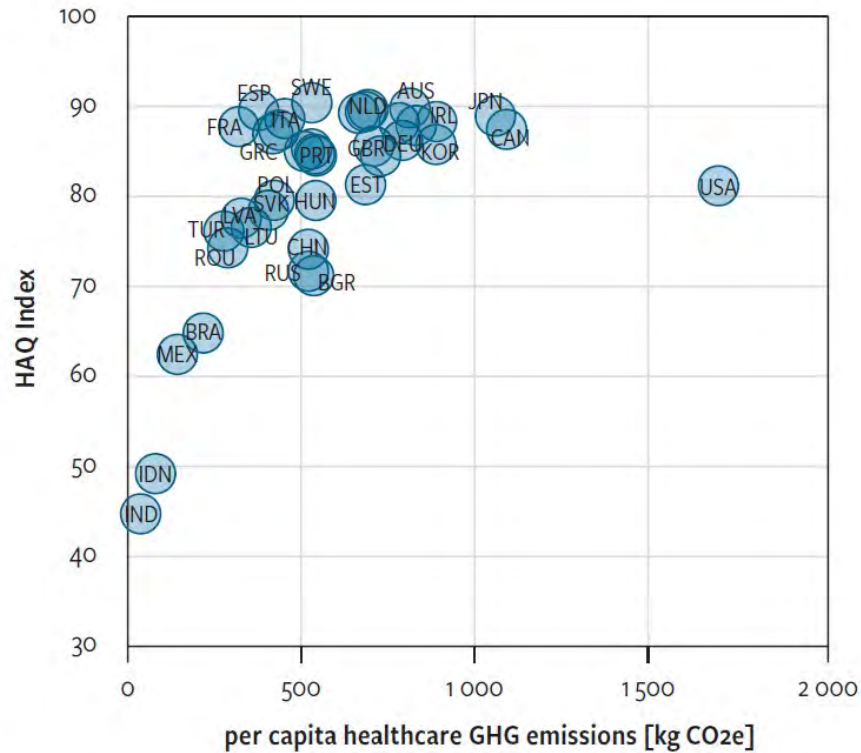


Figure 3. Émissions de GES des soins de santé par habitant vs l'indice HAQ (Healthcare Access Quality) national en 2017. Adapté de Watts *et al.*<sup>16</sup>

**Chapter 39** The science of sustainability in health services  
*Matthew Eckelman et al in Santé et Environnement*



# Seven proposals

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# Physicians' views of patient-planetary health co-benefit prescribing: a mixed methods systematic review

Nicole Redvers, Kyla Wright, Jamie Hartmann-Boyce\*, Sarah Tonkin-Crine\*

Health professionals are increasingly called to become partners in planetary health. Using patient-planetary health (P-PH) co-benefit prescribing framing, we did a mixed methods systematic review to identify barriers and facilitators to adopting P-PH co-benefit prescribing by physicians and mapped these onto the Capability, Opportunity, Motivation, and Behaviour (COM-B) model and Theoretical Domains Framework (TDF). We searched electronic databases from inception until October, 2022, and did a content analysis of the included articles (n=12). Relevant categories were matched to items in the COM-B model and TDF. Nine barriers and eight facilitators were identified. Barriers included an absence of, or little, knowledge of how to change practice and time to implement change; facilitators included having policy statements and guidelines from respected associations. More diverse study designs that include health professionals, patients, and health-care system stakeholders are needed to ensure a more holistic understanding of the individual, system, and policy levers involved in implementing clinical work informed by planetary health.



PHIRC 2021-2022 Summary Report United Kingdom	
<b>Brighton and Sussex Medical School (BSMS)</b>	
<b>Overall</b>	<b>B</b>
<b>Planetary Health Curriculum</b>	<b>B+</b>
<ul style="list-style-type: none"><li>Planetary health and sustainable healthcare topics are apparent throughout the curriculum across years 1-4 in various forms, including dedicated lectures, brief mentions and elective content (SSCs). However, planetary health content lacks longitudinal curricular integration, with most topics being delivered in years 1,2 and 4.</li><li><b>Recommendations:</b> We recommend that the curriculum be reviewed to embed longitudinal integration of planetary health and sustainable healthcare topics across all years.</li></ul>	
<b>Interdisciplinary Research in Health and the Environment</b>	<b>A+</b>
<ul style="list-style-type: none"><li>BSMS has a dedicated Sustainable Healthcare Group and the group's academic contacts and research activities are centralized in a comprehensive webpage. BSMS also co-hosts the <i>Sustainability Healthcare Academic Research and Enterprise (SHARE) Conference</i> annually.</li><li><b>Recommendations:</b> The medical school should establish further links with environmental justice communities who can provide input in the medical school's research agenda.</li></ul>	
<b>Community Outreach and Advocacy</b>	<b>C</b>
<ul style="list-style-type: none"><li>BSMS currently has little community outreach relating to planetary health. We also identified a lack of relevant postgraduate courses offered by BSMS or the affiliated NHS Trust.</li><li><b>Recommendations:</b> We recommend that BSMS and its Trust establish training courses, such as those offered by the <i>Centre for Sustainable Healthcare</i>. Community partnerships should also be formed, such as students teaching about climate change in local schools using BSMS's established <i>advisory</i> participation programs.</li></ul>	
<b>Support for Student-led Initiatives</b>	<b>A-</b>
<ul style="list-style-type: none"><li>Overall, there is some support for student-led initiatives at BSMS and the wider institution. An important recent improvement is the addition of student Sustainability Representatives.</li><li><b>Recommendations:</b> Support and funding for student-led initiatives mostly comes from the University of Sussex rather than the medical school directly. We recommend that BSMS offer increased support to students, for example by establishing dedicated funding for relevant student-led research.</li></ul>	
<b>Sustainability</b>	<b>B-</b>
<ul style="list-style-type: none"><li>The University of Sussex and the University of Brighton, BSMS's parent institutions, have both made good progress to improve their campus sustainability, including fossil fuel divestment, utilizing sustainable building practices and incorporating sustainability criteria into their supply procurement.</li><li><b>Recommendations:</b> Both universities need to take further steps to improve their campus sustainability. As a first step, we recommend that sustainability criteria be formed and made a requirement for all events.</li></ul>	

# Conclusion

- Health in the Anthropocene era must integrate socio-ecological constraints, which implies thinking health "within the limits".
- The "greening of supply chains", including in hospitals, will not be enough to achieve a coherent socio-ecological transition of the health system
- The currently predominant economic model, including for the health system, centred on a productivist and consumerist logic, is **incompatible with a sustainable vision of ecosystems, societies and health systems.**

## Acknowledgements :

- The more than 150 authors, experts, reviewers....
- Editions RMS
- ASSM

**Aussi en libre accès....**

