
nature
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PAGES 144 & 171
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How English become the academic lingua franca
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The costly war on cancer
How the brain drain reduces poverty
Welcome to the Anthropocene
Geology's new age

comment

Democratic directionality for transformative food systems research

Effective interfaces of knowledge and policy are critical for food system transformation. Here, an expert group assembled to explore research needs towards a safe and just food system put forward principles to guide relations between society, science, knowled

Jessica Duncan, Fabrice DeCle
Kerstin Cuhls, Lilia Ahrné, Stef
Henning Otte Hansen, Richard
Elke Saggau, Egizio Valceschini

Transformations towards sustainable food systems are required as part of the pressing challenge to keep humanity within a safe and just operating space'. Research and innovation policies are key to such transformations insofar as effectiveness and the legitimacy of policie are linked to the quality of the knowledge they use. Research and innovation have t power to drive knowledge production an its application to well-defined pathways with the narratives, priorities, rules, organizational patterns and financial resources that related policies provide. Towards this end, we argue that one key modality of engagement remains the science–policy interface. However, recent calls for new science-policy interfaces for food systems, as well as the integration of 'stakeholders' across the policy cycle, have raised important questions and concerns about the role of science and scientists, w Illuminating some of the politics and pow

reenshot

POLICY FORUM

FOOD

Do we need a new science-policy interface for food systems?

Credibility, legitimacy, and diversity of knowledge are critical

By Esther Turnhout[1,], Jessica Duncan[1], Jeroen Candel[2], Timo Y. Maas[3], Anna M. Roodhof[1], Fabrice DeClerck[4,], Robert T. Watson[5]

Food systems require urgent transformations to meet multiple demands of food and nutrition security, justice, livelihoods, biodiversity conservation, and climate change mitigation and adaptation. These transformations require

THE GLOBAL FOOD SYSTEMS SCIENCE-POLICY LANDSCAPE

There is no shortage of organizations and initiatives dedicated to the synthesis and assessment of knowledge around food systems for policy purposes. These include applied research organizations such as the reformed One CGIAR, assessment processes such as the International Assessment of Agricultural Knowledge, Science and

Readers respond

Correspondence

Global food security: pool collective intelligence

Earlier this year, our institutions issued the Montpellier Statement on possible strategies and avenues for accelerating the transformation to sustainability of local and global food systems (see go.nature.com/3upcsxt). This transformation has become increasingly urgent in light of rising food insecurity, climate change, environmental degradation, emerging diseases and social and economic disparities (see go.nature.com/3pyd32i).

To address the interconnected challenges of 'feed, protect and care', academic communities must radically change how they operate. They must create

To address racism, embe accountabili the research

To address systemi correct power imba science (M. Nobles 606, 225–227; 2022 actions are needed accountability. Thi researchers from h countries work wit communities in low nations – for exam public health or co is also crucial in wo vulnerable or unde communities in an

Accountability n span the whole res to ensure that the r relevant to the com studied and that kn

not simply controversies over competing values or interests; they are knowledge controversies (8).

ough there is no doubt about the of science, the persistence of knowl- controversies underscores the im- ce of including plural forms of edge from natur and humanities in Indigenous a s. A key task of anizing the rig pert-led synthes owledge withou e. Put differently olicy interface, interface. ever, ensuring ask in view of n knowledge h phical differenc s, access, and r between industry -oriented resea , IPBES is often echanism that o ensure this in gation (9), and

Comment

https://doi.org/10.1038/s43016-023-00878-w

Academics can do more to disrupt and reframe the solution space for food system transformation

Tim G. Benton

Check for updates

Food systems transformations are necessary, but will be difficult to achieve without disrupting current political framings and governance

These framing assumptions are so deep seated and orthodox that they are rarely formally questioned in the mainstream literature, but rather taken as the framing within which interventions need to be sought. Intervention pathways where governments restructure markets to better deliver public goods, enabling and incentivizing

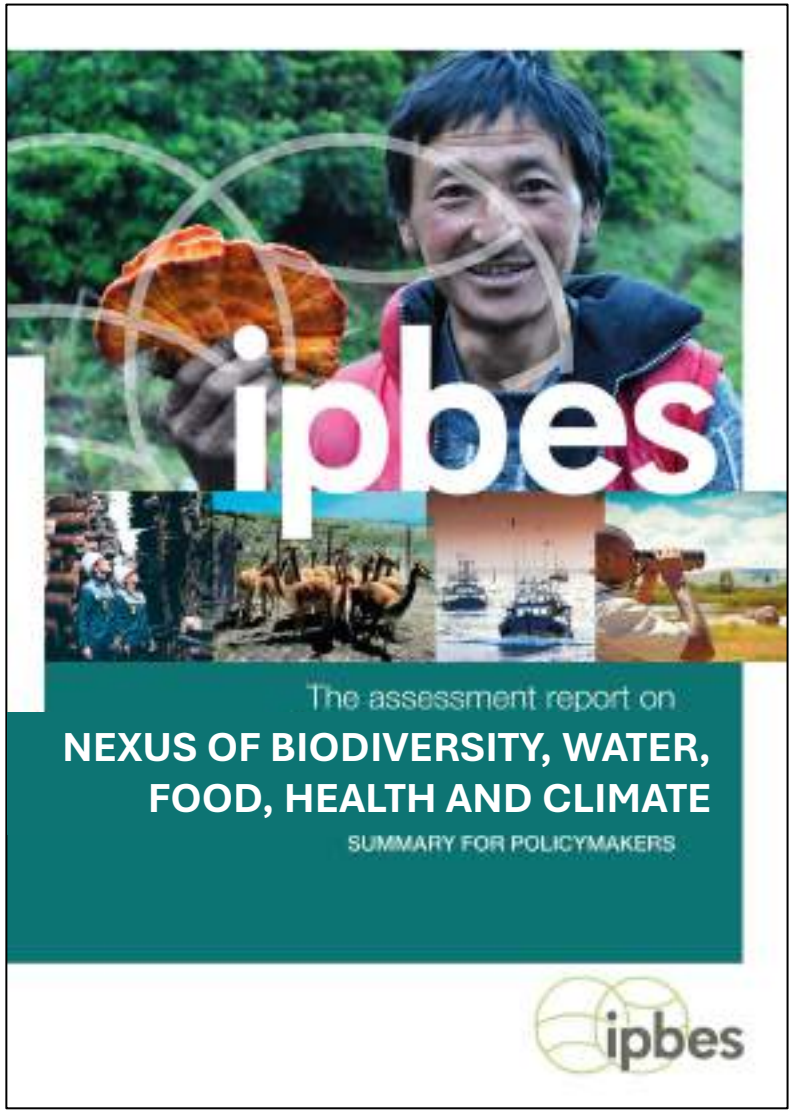
Comment

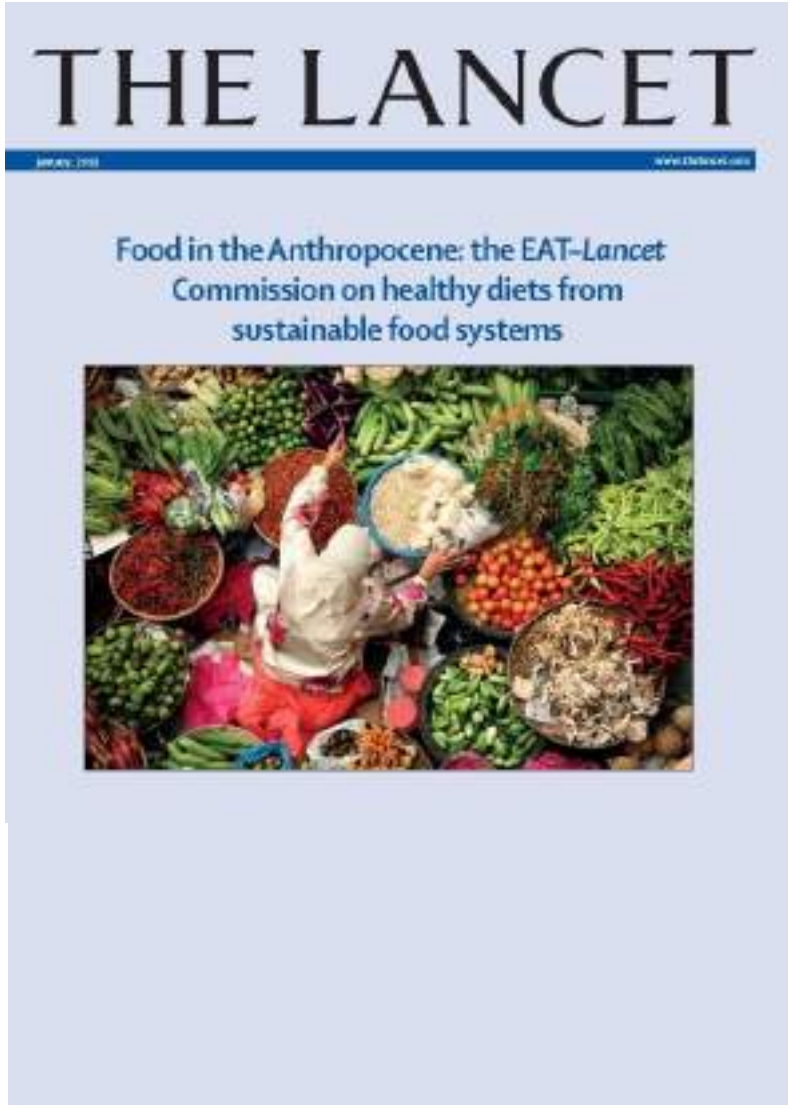
https://doi.org/10.1038/s43016-024-00966-3

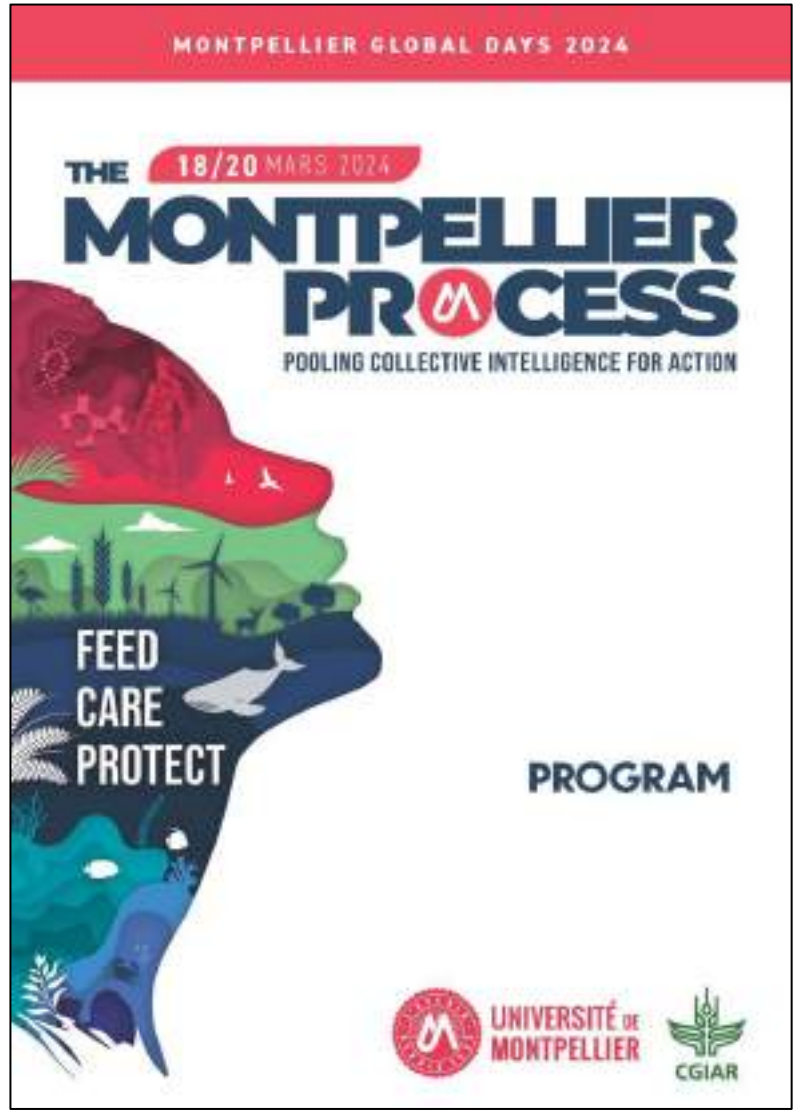
Knowledge democratization approaches for food systems transformation

Samara Brock, Lauren Baker, Amanda Jekums, Faris Ahmed, Margarita Fernandez, Mayra Montenegro de Wit, Francisco J. Rosado-May, V. Ernesto Méndez, Colin R. Anderson, Fabrice DeClerck, Molly D. Anderson, Rachel Bezner Kerr, Brendan Hoare, Hannah Wittman, Amaury Peeters, Peter Gubbels, Cerasela Stancu,

THREE EXAMPLES of Integrated Science Engagement with Action

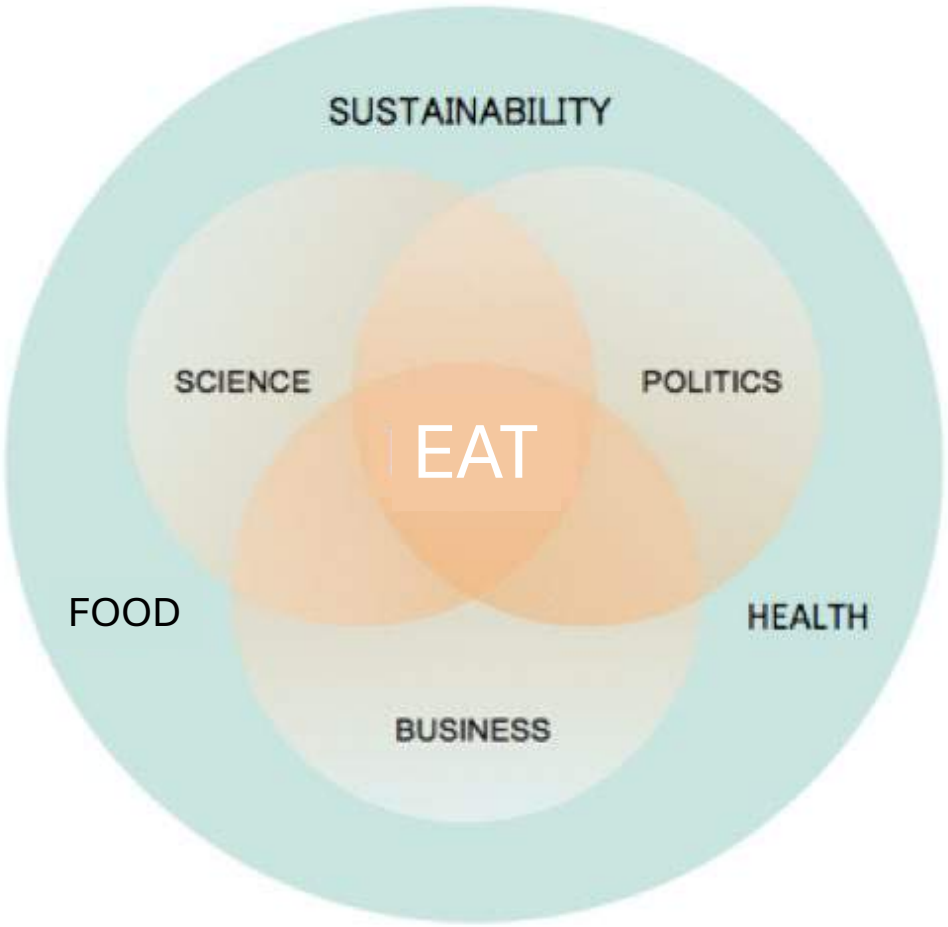






Healthy Diets from Sustainable Food Systems

The Lancet, October 2017



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Juan Dommarco
Sunita Narain

Healthy Diets from Sustainable Food Systems

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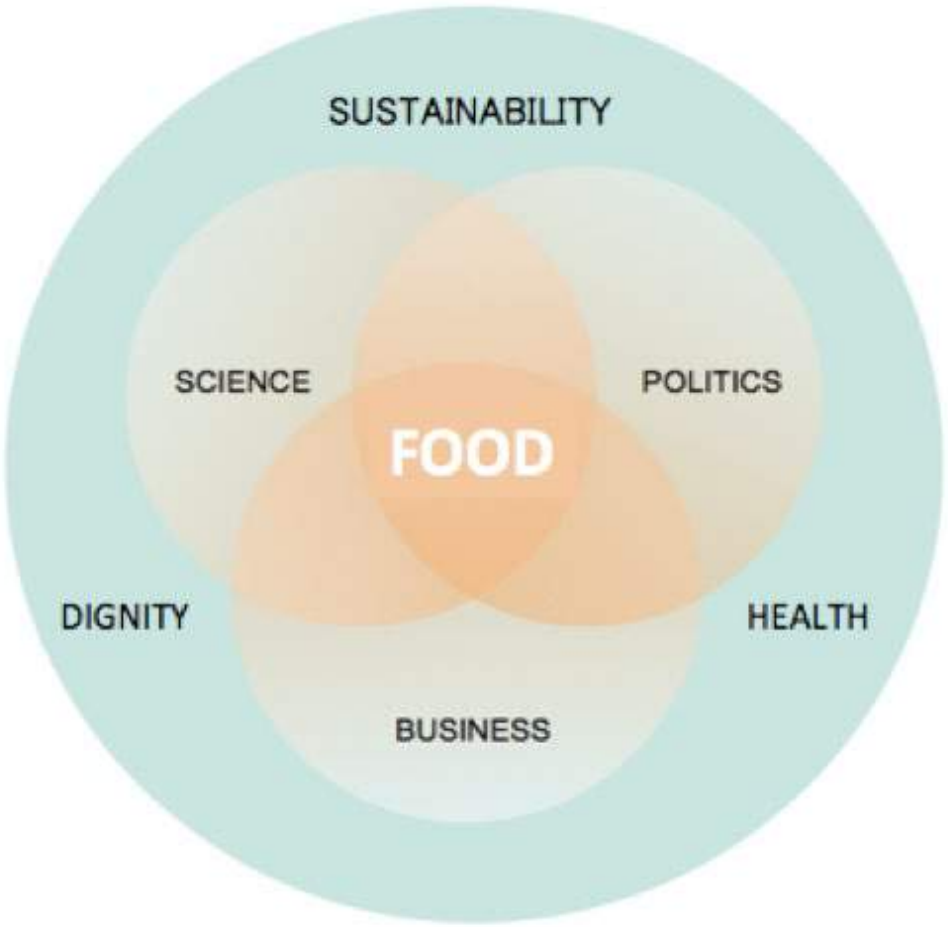

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NEWS | 15 April 2024 | Correction 22 April 2024

Revealed: the ten research papers that policy documents cite most

An exclusive analysis shows that economics and interdisciplinary teams get the attention of policymakers.

Title	Journal	Year
Governing the Commons (monograph)	-	1990
The value of the world's ecosystem services and natural capital	*Nature*	1997
Planetary boundaries: guiding human development on a changing planet	*Science*	2015
Social capital in the creation of human capital	*American Journal of Sociology*	1988
Absorptive capacity: a new perspective on learning and innovation	*Administrative Science Quarterly*	1990
Food in the Anthropocene: the EAT–*Lancet* Commission on healthy diets from sustainable food systems	*The Lancet*	2019
[illegible] computerisation?	*Technological Forecasting and Social Change*	2017
The Tragedy of the Commons	*Science*	1968
Using thematic analysis in psychology	*Qualitative Research in Psychology*	2008
A safe operating space for humanity	*Nature*	2009

Data from Overton as of 15 April 2024

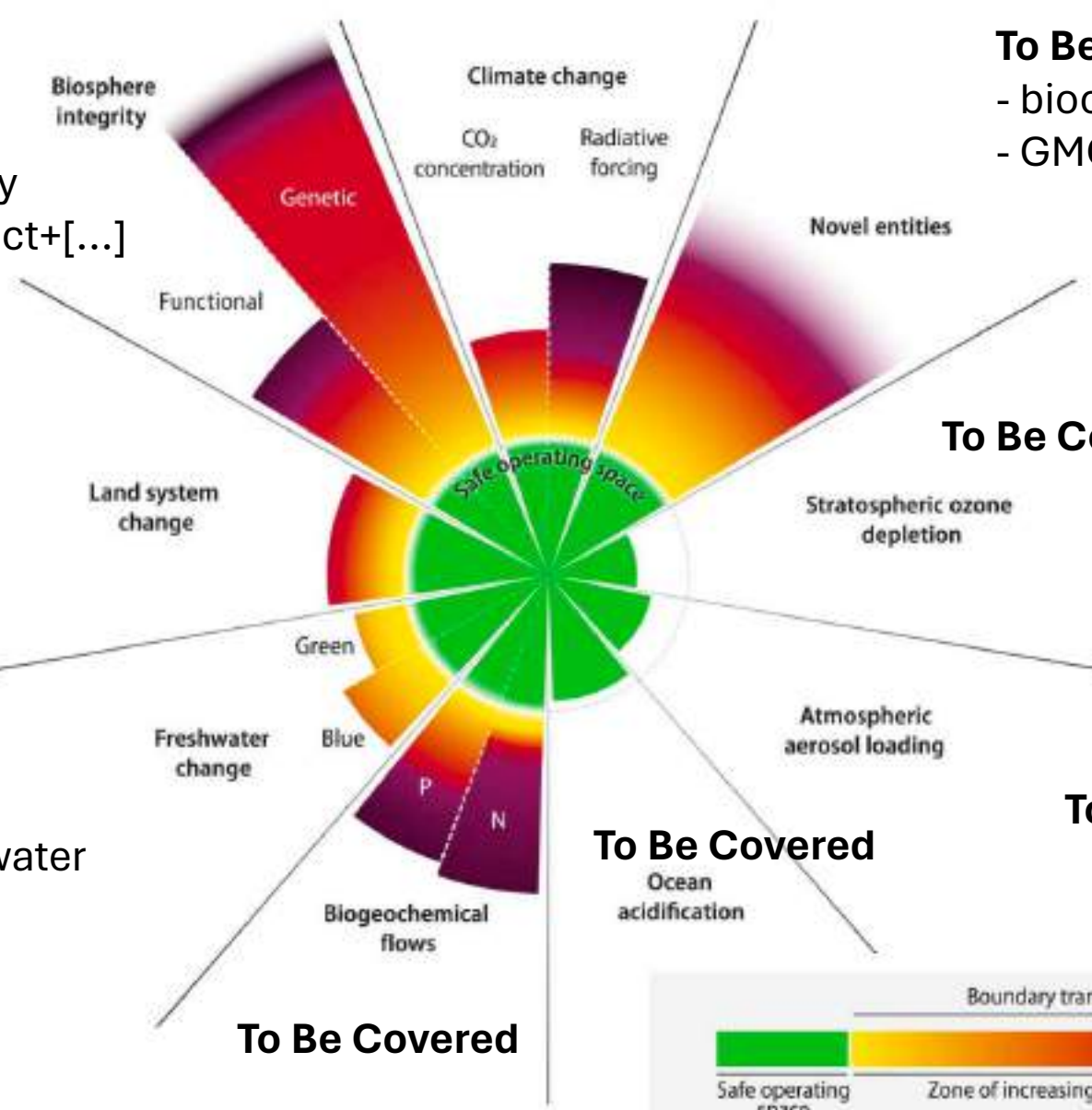
Target 1 – **Healthy Diets**

2500 kcal/day

To Be Covered or Mentioned
- CH_4 and N_2O

To Be Covered
- HANPP (<20%)
- Connectivity
- Ecosystem Func. Integrity
- Genetic = Intact + Connect+[...]

To Be Covered or Mentioned
- biocides (In relation to resistance risk)
- GMO (in relation to BI Genetic)



To Be Covered
- Intact land
- Add a marine measure
- consider most restrictive interaction between *climate*, *water*, *biodiversity*

To Be Covered

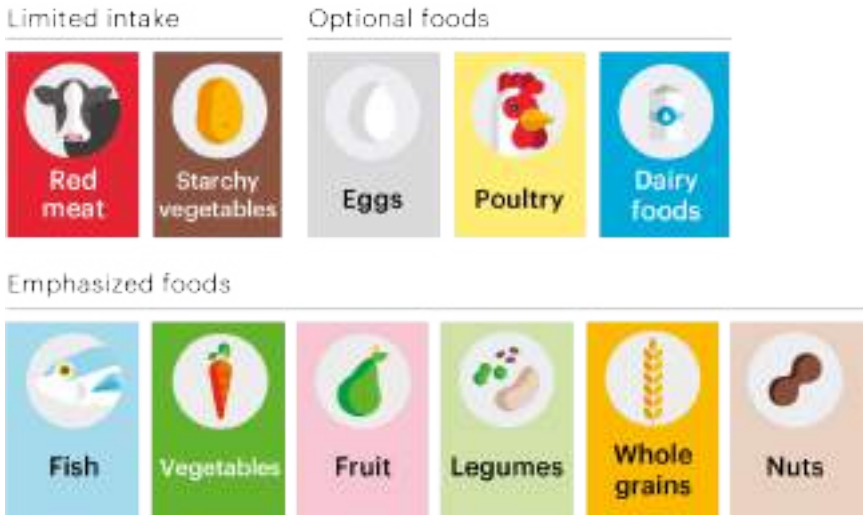
To Be Covered
- Adding Groundwater

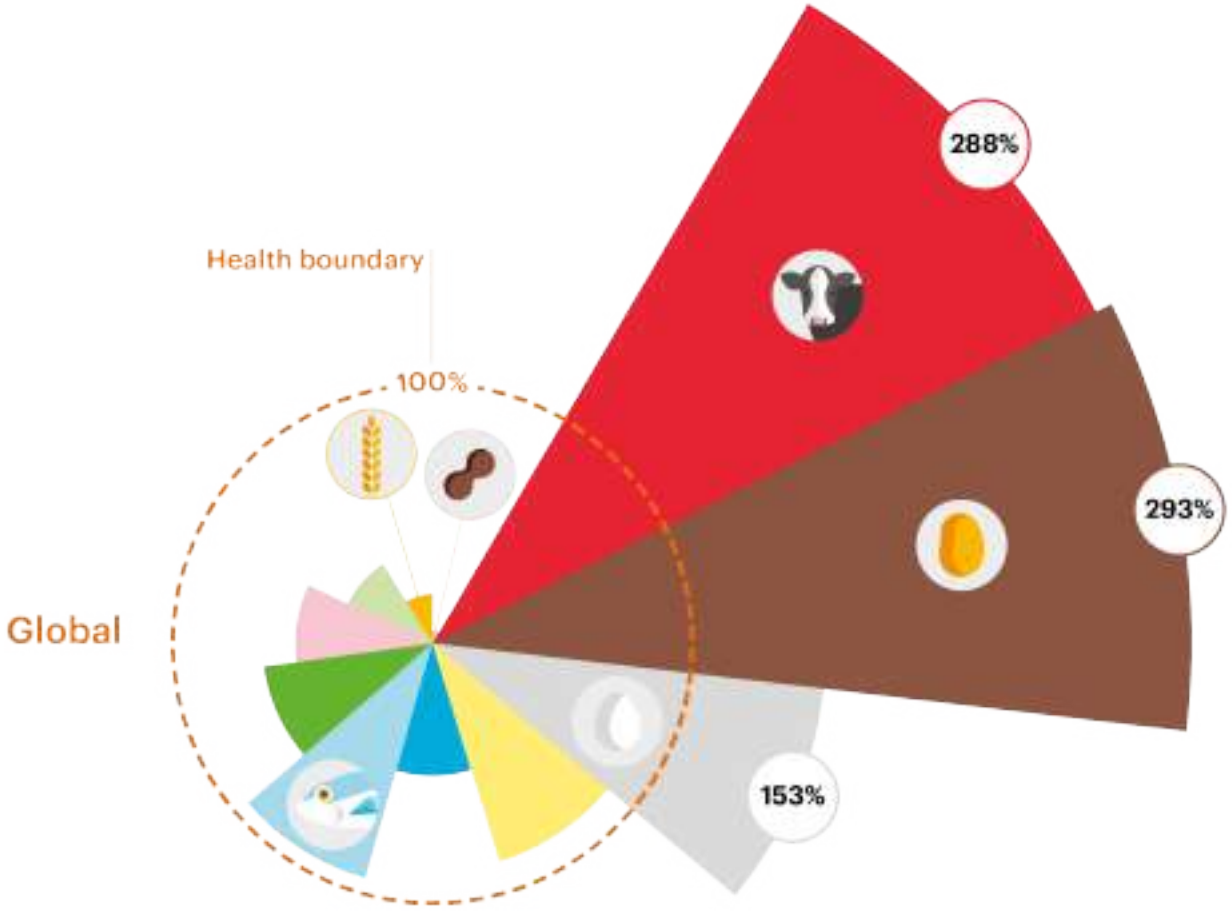
To Be Covered

To Be Covered

To Be Covered

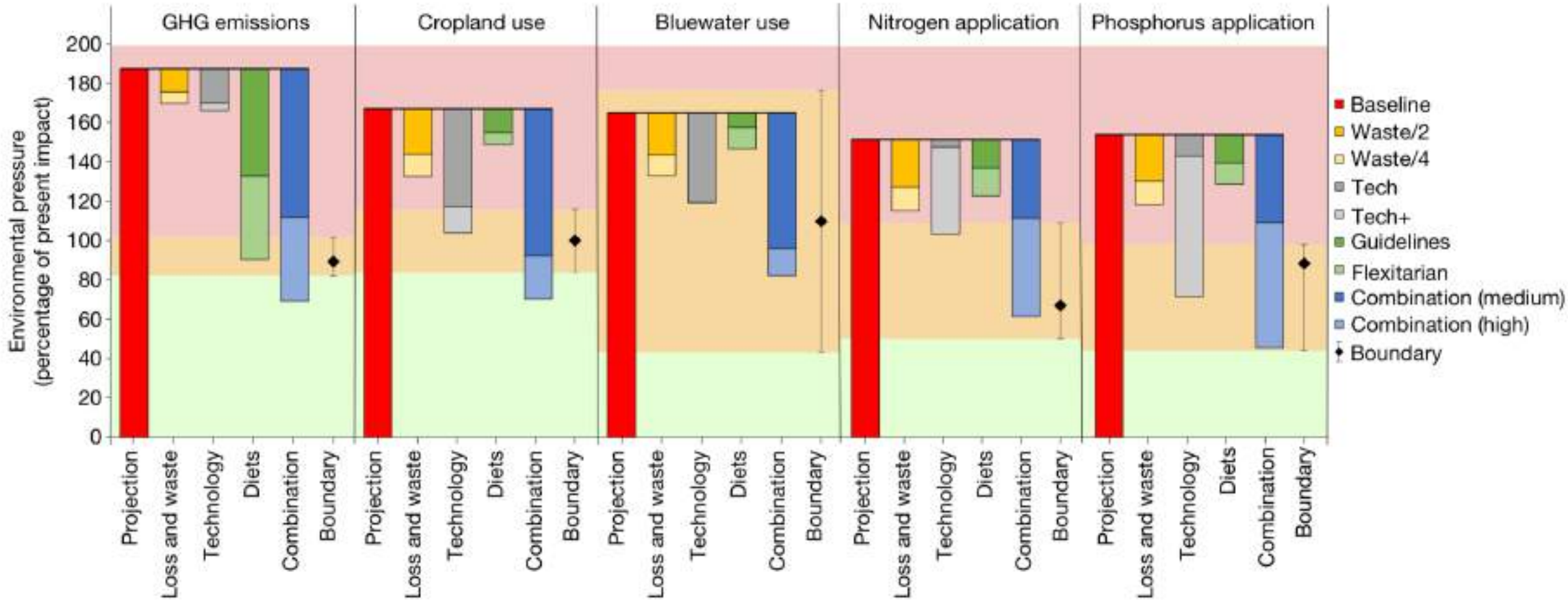
Current Intakes vs Planetary Health Diet





Options for keeping the food system within environmental limits

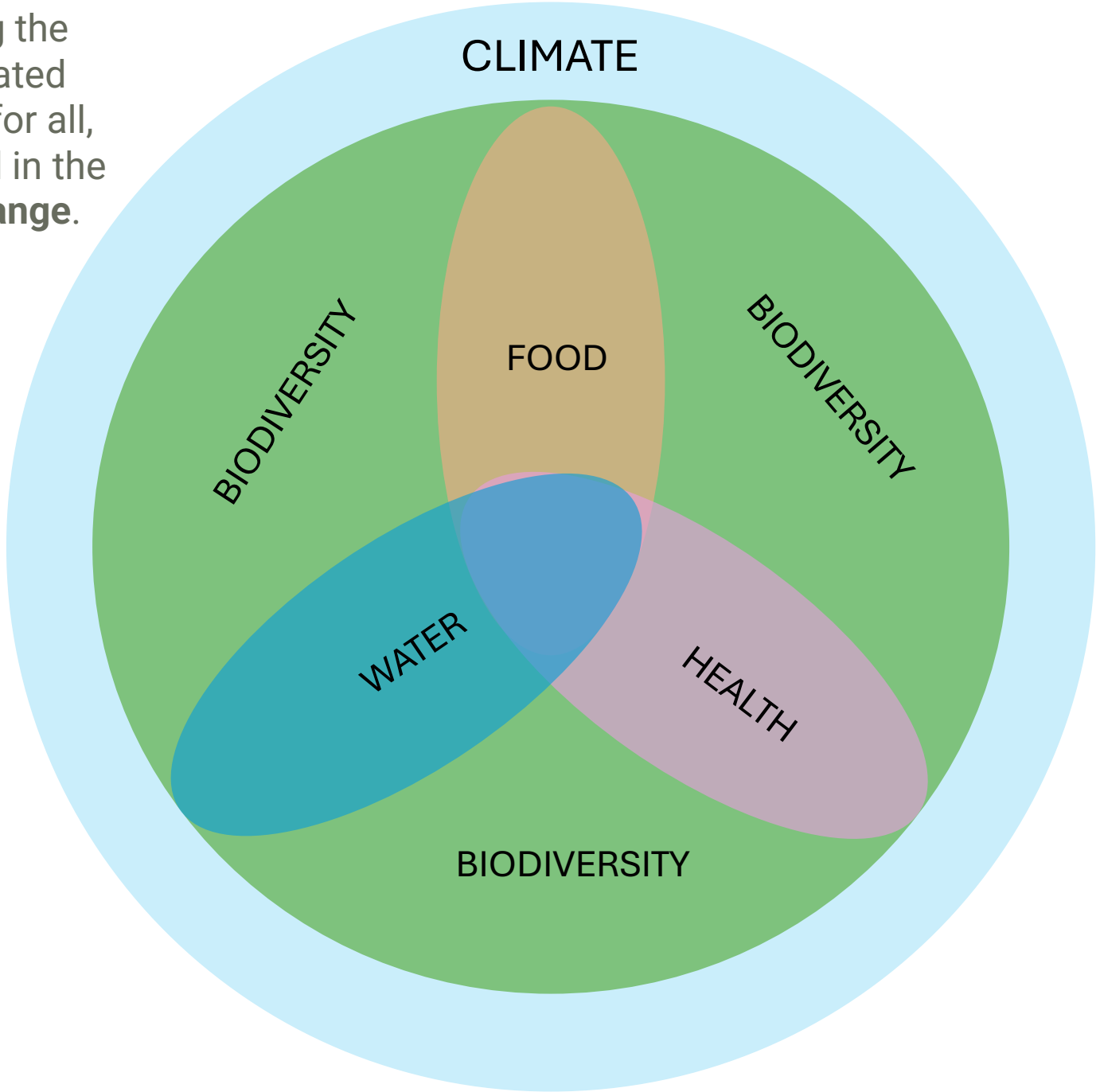
Marco Springmann[1,2]*, Michael Clark[3], Daniel Mason-D'Croz[4,5], Keith Wiebe[3], Benjamin Leon Bodirsky[6], Luis Lassaletta[7], Wim de Vries[8], Sonja J. Vermeulen[9,10], Mario Herrero[5], Kimberly M. Carlson[11], Malin Jonell[12], Max Troell[12,13], Fabrice DeClerck[14,15], Line J. Gordon[12], Rami Zurayk[16], Peter Scarborough[2], Mike Rayner[2], Brent Loken[14], Jess Fanzo[17,18], H. Charles J. Godfray[1,19], David Tilman[20,21], Johan Rockström[12] & Walter Willett[22]




THE LANCET

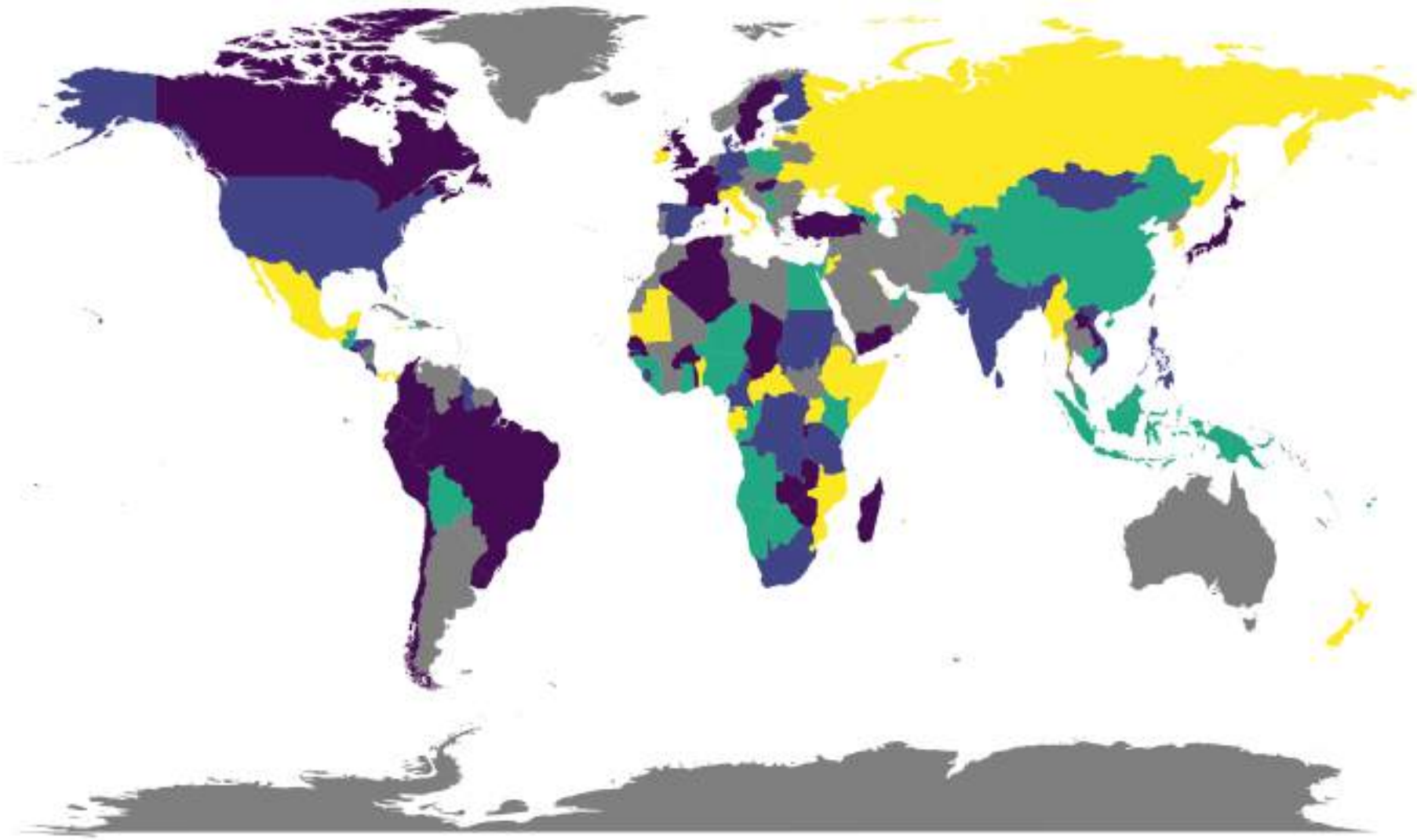

OREO

examining the interlinkages among the sustainable development goals related to **food** and **water** security, **health** for all, protecting **biodiversity** on land and in the oceans and combating **climate change**.

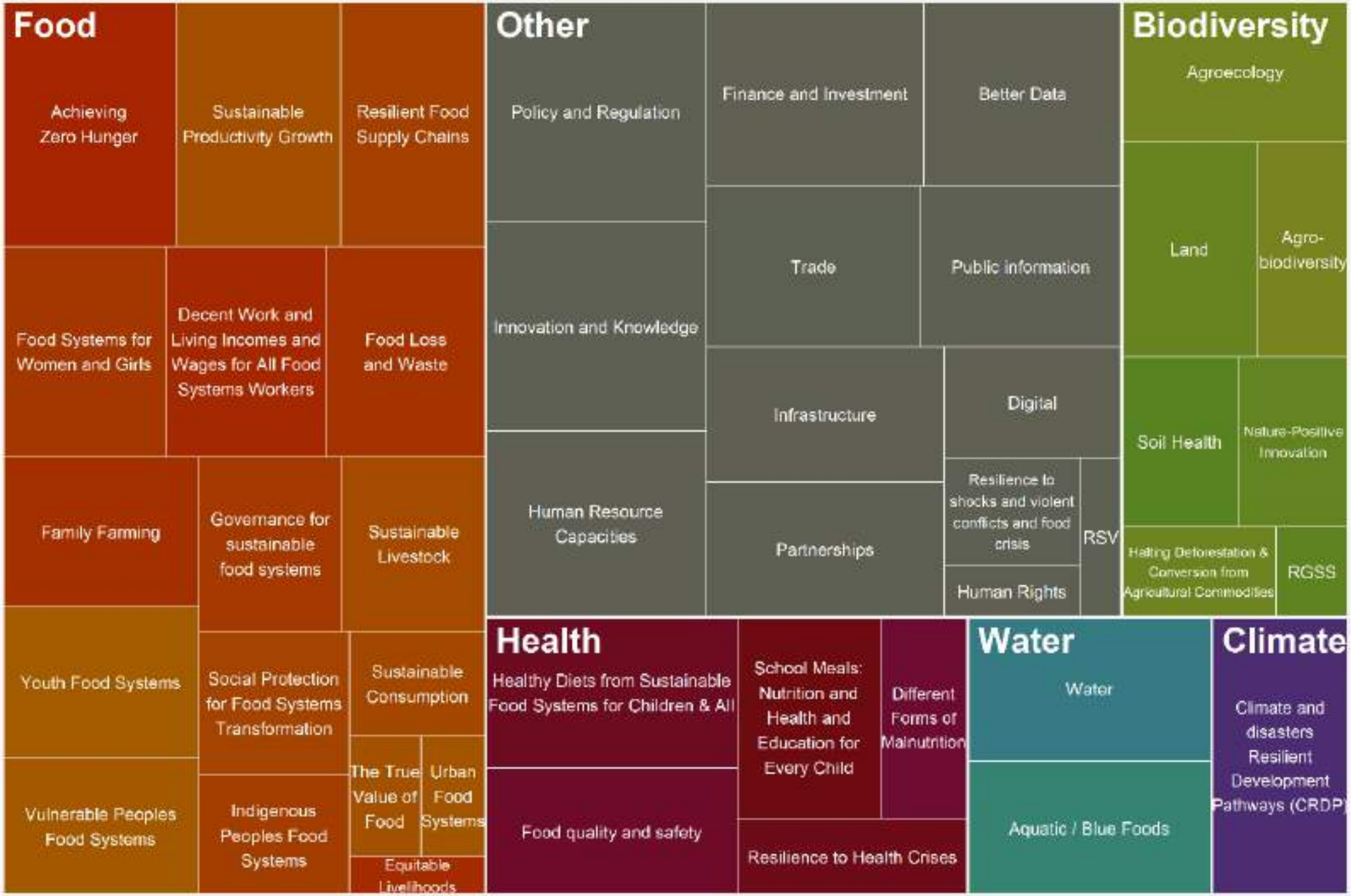


ipbes
Science and Policy for People and Nature

126 countries have published pathways



UNITED NATIONS FOOD SYSTEMS COORDINATION HUB



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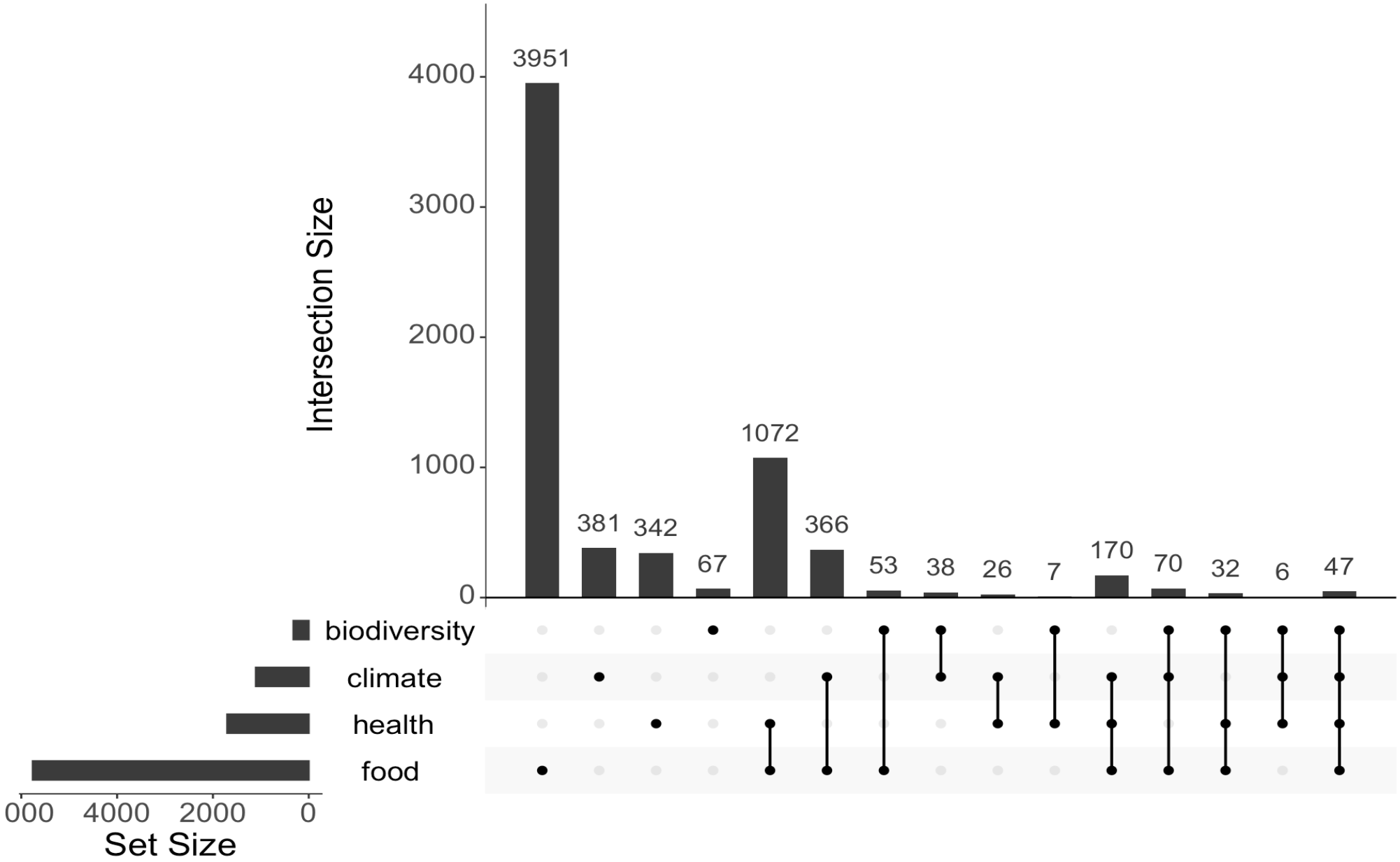
Science and Policy for People and Nature

UNITED NATIONS FOOD SYSTEMS COORDINATION HUB

cirad
AGRICULTURAL RESEARCH
FOR DEVELOPMENT



Increase the share of **food consumed in Paris and produced in the Paris Basin to 50%,** compared to 25% currently

Mobilize the key players in the Paris region (Ile-de-France) to **reach a target of 20% of agricultural land dedicated to organic agriculture**, compared to 2.7% in 2017

Increase the share of **agricultural land in the Paris region to 50%**

Decrease the region's "food" **carbon footprint by 40%**

Stimulate 75% of Parisian households to regularly buy **organic products**

Contribute to changing the nutritional balance of the population towards a "flexitarian" diet, a diet that is rich in fruit and vegetables with less meat and fish and that has a reduced impact on the environment

Reduce the rate of obesity in Paris from 10.7% in 2017 **to 5%,** with targeted action in priority neighbourhoods

Eliminate food insecurity. People in situations of food insecurity still represent 6.3% of the population in 2016

Expand transport by electric vehicles, bikes, on-foot and by river for the food supply

In addition, **in local government-operated canteens and restaurants,** the City of Paris will increase the proportion of **sustainable food to 90% by 2050.**

The New York Times

Hold the French Fries! Paris Olympics Chart a New Gastronomic Course.

The environment will come first as France tries to revitalize the global image of its cuisine.

POLITIQUE – PARIS

Paris va subventionner les agriculteurs pour améliorer la qualité de l'eau du robinet

Pour la première fois, une ville française va aider financièrement les agriculteurs qui utilisent moins de pesticides et d'engrais. La Commission européenne a donné son feu vert.

Par Denis Cosnard

Publié le 17 février 2020 à 15h10, modifié le 17 février 2020 à 15h21 · Lecture 2 min.

Ajouter à vos sélections

Le Monde

The New York Times

Three Places Changing Quickly to Fight Climate Change

Paris is becoming a city of bikes. Across China, people are snapping up $5,000 electric cars. On Earth Day, a look at a few bright spots for emission reductions.

PLANÈTE – DES SOLUTIONS POUR LA PLANÈTE

Pour protéger la qualité de son eau potable, Paris tente de convertir les agriculteurs au bio

La capitale, qui s'approvisionne à la campagne, veut convaincre les agriculteurs d'avoir la main moins lourde sur les engrais et les pesticides.

Par Martine Valo

Publié le 10 avril 2019 à 01h55, modifié le 10 avril 2019 à 15h59 · Lecture 5 min.

Le Monde

Major Gaps Persist:

but maybe we're not focused on the right ones?

Knowledge: true cost of food, food safety, social justice dimensions [...]

Integration: climate with food, trade, health and environment [...]

Engagement: Cities, Countries, Companies, Citizens, Trade, Policy [...]

Translation: not just the what, but the how

POOLING COLLECTIVE INTELLIGENCE

SUPPORTING KNOWLEDGE AND ACTION