Discussion

OPPORTUNITIES AND LIMITATIONS OF THE CO-BENEFITS CONCEPT

The idea of co-benefits provides a conceptual tool allows us to grasp the human (and health) dependency on ecosystems, by connecting the short- and long-term benefits of mitigating environmental degradation to evident short-term effects on public health. This oulook could thus bolster individual behavioral changes and the implementation of structural measures, with the goal of reaping two-fold benefit: improving individual and population health and reducing environmental degradation. It is not a matter of entertaining duality by differentiating human benefits and benefits to the natural environment. As mentioned in the introduction, as humans depend on their environment, an environmental benefit of an action geared towards improving human health will recipricate benefit for humans – it is therefore doubly beneficial to health, rather than a co-benefit that helps only the environment. For example, reducing greenhouse gas emissions by promoting active mobility over car use has a twofold positive health effect: there is the benefit of the physical activity on the user, and the reduction in health risk related to global warming for the population.

By tying environmental issues to health questions, co-benefits stimulates contemplating the costs and benefits of individual or societal actions for the individuals, their community and the environment, both now and in the future, here and on the other side of the planet. Linked to better recognition of the major risks to health steming from the profound degradation of ecosystems observed around the world, this concept provides an opportunity, among others, for health services to play a key role in advocating structural measures and individual behavioral changes in the struggle against environmental degradation.[11,16,19,20,25] In this sense, clinical practitioner recommendations could be connected to regional governance measures, to endorse changes in certain lifestyle habits.

PLANETARY BOUNDERIES AND HUMAN ACTIVITY

Planetary boundaries establish a strict framework that should limit human activity. Slowing the pace of biodiversity erosion and reaching carbon neutrality require deep and systemic changes to our lifestyles, particularly when it comes to farming and food, and mobility. These changes will need to be accompanied by a new or renewed relationship with nature that recognizes the biosphere's ecological limits and human dependency on ecosystems.

As J. Baird Callicott notes: "Human activity should at least be compatible with the ecological health of the natural environment in which it takes place. Ideally, it should enrich it."[143] Yet, it is a known fact that the current predominant economic model, including within health services, centered around a logic of productivity and short-term yields, is incompatible with sustainable ecosystems and societies.[144] The pressure of planetary restraints thus pose a challenge to all human activities, including medical practice: if human health depends on respecting the biosphere's maximum, how do we improve human health without contributing

to environmental degradation? How should health be defined and how should health services be designed within the confines of planetary bounderies?[145.146]

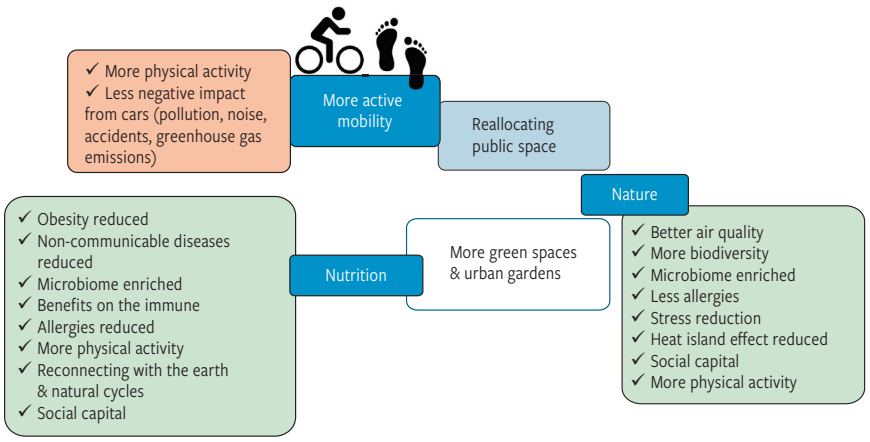
WHAT FUTURE PATHWAYS DO CO-BENEFITS OFFER?

The concept of co-benefits is promising, but further research is needed to make it a real path towards future change, and to gain a better understanding of which interventions would be most effective, and what types of actions to favor, based on the geographic and socioeconomic contexts of patients and individuals. What is more, awareness of how certain measures work in relation to another could contribute to mutually strengthening them. This was seen in the case of community gardens, which naturally link questions concerning both food and contact with nature. Similarly, mobility is closely tied to problems of territorial planning. For example, by reallocating a portion of public space currently devoted to parking, more green spaces or urban gardens could see the light of day (**figure 10**).

The intersection of interventions at individual and structural levels (legislation, infrastructure, social norms...) must be well thought out to guarantee the effectiveness of the interventions. The success promoting particular behavior is largely limited if structural frameworks and social norms back them. Naturally, recommending people to eat less meat or ride a bike to work, will be hard go for if there are no vegetarian options in the workplace cafeteria, or if bike lanes don't appear safe or practicable. How could health workers and services behave to inspire communities respect their planet's limits and take action as individuals and a whole. This is particularly relevant for primary caregivers who will need to play an active role in the local community they serve.

FIG 10 **Intersections in Public Space**

Places where mobility, food, and contact with nature converge through sharing of public space.



Bibliography

1 Gaille M. Santé et environnement. Paris: PUF; 2018.
2 Whitmee S., et al. Safeguarding human health in the Anthropocene epoch: report of The Rockefeller Foundation – Lancet Commission on planetary health. Lancet 2015;386:1973-2028.
3 Harrison S, et al. EcoHealth and One Health: A theory-focused review in response to calls for convergence. Environ Int 2019;132:105058.
4 Robinson JM, Breed MF. Green Prescriptions and Their Co-Benefits: Integrative Strategies for Public and Environmental Health. Challenges 2019;10:9.
5 Rockström J, et al. Planetary boundaries: exploring the safe operating space for humanity. Ecology and society 2009;14.
6 Steffen W, et al. Planetary boundaries: Guiding human development on a changing planet. Science 2015;347:1259855.
7 Myers SS, et al. Human health impacts of ecosystem alteration. Proc Natl Acad Sci U S A 2013;110:18753-60.
8 Watts N, et al. The 2018 report of the Lancet Countdown on health and climate change: shaping the health of nations for centuries to come. Lancet 2018;392:2479-514.
9 Watts N, et al. The 2019 report of The Lancet Countdown on health and climate change: ensuring that the health of a child born today is not defined by a changing climate. Lancet 2019;394:1836-78.
10 Bain PG, et al. Co-benefits of addressing climate change can motivate action around the world. Nature Climate Change 2016;6:154-57.
11 Amelung D, et al. Human health as a motivator for climate change mitigation: results from four European high-income countries. Global Environmental Change 2019;57:101918.
12 Depoux A, et al. Communicating climate change and health in the media. Public Health Rev 2017;38:7.
13 WONCA, PHA, Clinicians for Planetary Health Working Group. Declaration calling for family doctors of the world to act on planetary health; 2019.
14 Veidis EM, et al. A call for clinicians to act on planetary health. Lancet 2019;393:2021.
15 Butler CD. Lightening our carbon footprint: economics, norms and doctors. Med J Aust 2010;192:485-6.
16 Sauerborn R, Kjellstrom T, Nilsson M. Health as a crucial driver for climate policy. Glob Health Action 2009;2:2104.
17 Ganten D, Haines A, Souhami R. Health co-benefits of policies to tackle climate change. Lancet 2010;376:1802-4.
18 Roberts I. The health co-benefits of climate change policies: doctors have a responsibility to future generations. Clin Med (Lond) 2009;9:212-3.
19 Smith KR, Haigler E. Co-Benefits of Climate Mitigation and Health Protection in Energy Systems: Scoping Methods. Annu Rev Public Health 2008;29:11-25.
20 Barrett B, et al. Mindful Climate Action: Health and Environmental Co-Benefits from Mindfulness-Based Behavioral Training. Sustainability 2016;8:1040.
21 Wilkinson P, et al. Public health benefits of strategies to reduce greenhouse-gas emissions: household energy. Lancet 2009;374:1917-29.
22 Friel S, et al. Public health benefits of strategies to reduce greenhouse-gas emissions: food and agriculture. Lancet 2009;374:2016-25.
23 WONCA, Working Party on the Environment, PHA, Clinicians for Planetary Health Working Group. Declaration calling for clinicians of the world to act on planetary health; 2019. Disponible sur : files.visura.co/users/12837/9c0af30afdb-8667feb2542f973bb47e6.pdf.
24 Pichler PP, et al. International comparison of health care carbon footprints. Environmental Research Letters 2019;14:064004.
25 Thurston GD. Health co-benefits. Nature Climate Change 2013;3:863-4.
26 Willett W, et al. Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems. Lancet 2019;393:447-92.
27 Springmann M, et al. Options for keeping the food system within environmental limits. Nature 2018;562:519-25.
28 Vermeulen SJ, Campbell BM, Ingram JS. Climate change and food systems. Annual review of environment and resources 2012;37.
29 Tilman D, Clark M. Global diets link environmental sustainability and human health. Nature 2014;515:518-22.
30 Scarborough P, et al. Modelling the health impact of environmentally sustainable dietary scenarios in the UK. Eur J Clin Nutr 2012;66:710-15.
31 Behrens P, et al. Evaluating the environmental impacts of dietary recommendations. Proc Natl Acad Sci U S A 2017;114:13412-7.
32 Popkin BM. Global nutrition dynamics: the world is shifting rapidly toward a diet linked with noncommunicable diseases.Am J Clin Nutr 2006;84:289-98.
33 Jenny Gustavsson CC. Ulf Sonessen, Global food losses and food waste: Extent, cause and prevention. Food and Agriculture Organisation of the United Nations; 2011.
34 Food Wastage Footprint – Impacts on Natural Resources – Summary report. BIO-Intelligence Service, Food and Agriculture Organization of the United Nations (FAO); 2013.
35 Boucher J, Friot D. Primary Microplastics in the Oceans: A Global Evaluation of Sources. Gland: IUCN; 2017. p. 43.
36 Jambeck JR, et al. Plastic waste inputs from land into the ocean. Science 2015;347:768-71.
37 Lau WWY, et al. Evaluating scenarios toward zero plastic pollution. Science 2020;eaba9475.
38 Bauer UE. et al. Prevention of chronic disease in the 21st century: elimination of the leading preventable causes of premature death and disability in the USA. Lancet 2014;384:45-52.
39 Sustainable health diets – Guiding principles. FAO, WHO: Rome; 2019.
40 Afshin A, et al. Health effects of dietary risks in 195 countries, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. Lancet 2019;393:1958-72.
41 Milner J, et al. Health effects of adopting low greenhouse gas emission diets in the UK. BMJ Open 2015;5:e007364.
42 Summary Report of the EAT-Lancet Commission. Healthy Diets From Sustainable Food Systems. Food Planet Health.
43 Springmann M, et al. The healthiness and sustainability of national and global food based dietary guidelines: modelling study. BMJ 2020;370:m2322.
44 Lanou AJ, Berkow SE, Barnard ND. Calcium, dairy products, and bone health in children and young adults: a reevaluation of the evidence. Pediatrics 2005;115:736-43.
45 Smith-Spangler C. et al. Are organic

foods safer or healthier than conventional alternatives?: a systematic review. Ann Intern Med 2012;157:348-66.
46 Montiel-León JM, et al. Occurrence of pesticides in fruits and vegetables from organic and conventional agriculture by QuEChERS extraction liquid chromatography tandem mass spectrometry. Food Control 2019;104:74-82.
47 Hoefkens C, et al. Consuming organic versus conventional vegetables: The effect on nutrient and contaminant intakes. Food Chem Toxicol 2010;48:3058-66.
48 Barański M, et al. Higher antioxidant and lower cadmium concentrations and lower incidence of pesticide residues in organically grown crops: a systematic literature review and meta-analyses. Br J Nutr 2014;112:794-811.
49 Gregorio V., Chèvre N. Assessing the risks posed by mixtures of chemicals in freshwater environments: case study of Lake Geneva, Switzerland. WIREs Water 2014;1:229-47.
50 Singh AK, Bhunia AK. Animal-Use Antibiotics Induce Cross-Resistance in Bacterial Pathogens to Human Therapeutic Antibiotics. Curr Microbiol 2019;76:1112-7.
51 Littmann J, Buyx A, Cars O. Antibiotic resistance: An ethical challenge. Int J Antimicrob Agents 2015;46:359-61.
52 Muller A, et al. Strategies for feeding the world more sustainably with organic agriculture. Nat Commun 2017;8:1290.
53 Cobiac LJ, et al. Taxes and Subsidies for Improving Diet and Population Health in Australia: A Cost-Effectiveness Modelling Study. PLoS Med 2017;14:e1002232.
54 Niebylski ML, et al. Healthy food subsidies and unhealthy food taxation: A systematic review of the evidence. Nutrition 2015;31:787-95.
55 Brownell KD, et al. The public health and economic benefits of taxing sugar-sweetened beverages. N Engl J Med 2009;361:1599.
56 Locke A, Schneiderhan J, Zick SM. Diets for Health: Goals and Guidelines. Am Fam Physician 2018;97:721-8.
57 Obert J, et al. Popular Weight Loss Strategies: a Review of Four Weight Loss Techniques. Curr Gastroenterol Rep 2017;19:61.
58 Tobias DK, et al. Effect of low-fat diet interventions versus other diet interventions on long-term weight change in adults: a systematic review and meta-analysis. Lancet Diabetes Endocrinol 2015;3:968-79.
59 Gudzune KA, et al. Efficacy of commercial weight-loss programs: an updated systematic review. Ann Intern Med 2015;162:501-12.
60 Ramage S, et al. Healthy strategies for successful weight loss and weight maintenance: a systematic review. Appl Physiol Nutr Metab 2014;39:1-20.
61 Dinu M, et al. Vegetarian, vegan diets and multiple health outcomes: A systematic review with meta-analysis of observational studies. Crit Rev Food Sci Nutr 2017;57:3640-9.
62 Appleby PN, Key TJ. The long-term health of vegetarians and vegans. Proc Nutr Soc 2016;75:287-93.
63 Office fédéral de la statistique (OFS). Impact sur l'environnement. 8 octobre 2020. Disponible sur : www.bfs.admin.ch/bfs/fr/home/statistiques/mobilite-transports/accidents-impact-environnement/impact-environnement.html#-1371462205.
64 European Environmnetal Agency. Air Quality in Europe – 2019 Report. EEA Report.
65 Evangeliou N, et al. Atmospheric transport is a major pathway of microplastics to remote regions. Nat Commun 2020;11:3381.
66 Spielmann M, Althaus H-J. Can a prolonged use of a passenger car reduce environmental burdens? Life Cycle analysis of Swiss passenger cars. Journal of Cleaner Production 2007;15:1122-34.
67 Khreis H, et al. The health impacts of traffic-related exposures in urban areas: Understanding real effects, underlying driving forces and co-producing future directions. Journal of Transport & Health 2016;3:249-67.
68 Mark J, Nieuwenhuijsen HK, Verlinghieri E, Rojas-Rueda D. Transport and health: a marriage of convenience or an absolute necessity. Environ Int 2016;88:150-2.
69 Héran F. Vers des politiques de déplacements urbains plus cohérentes. Norois 2017;245:89-100.
70 Raza W, et al. Air pollution as a risk factor in health impact assessments of a travel mode shift towards cycling. Glob Health Action 2018;11:1429081.
71 Office fédéral du developpement territorial ARE. Coûts et bénéfices externes des transports en Suisse – Transports par la route et le rail, par avion et par bateau 2017; 2020.
72 Héritier H, et al. A systematic analysis of mutual effects of transportation noise and air pollution exposure on myocardial infarction mortality: a nationwide cohort study in Switzerland. Eur Heart J 2018;40:598-603.
73 Rossi IA, et al. Estimating the health benefits associated with a speed limit reduction to thirty kilometres per hour: a health impact assessment of noise and road traffic crashes for the Swiss city of Lausanne. Environ Int 2020;145:106126.
74 Biswas A, et al. Sedentary time and its association with risk for disease incidence, mortality, and hospitalization in adults: a systematic review and meta-analysis. Ann Intern Med 2015;162:123-32.
75 Patterson R, et al. Sedentary behaviour and risk of all-cause, cardiovascular and cancer mortality, and incident type 2 diabetes: a systematic review and dose response meta-analysis. Eur J Epidemiol 2018;33:811-29.
76 Sugiyama T, et al. Car use and cardiovascular disease risk: Systematic review and implications for transport research. Journal of Transport & Health 2020;19:100930.
77 Sandberg U. Tyre/road noise – Myths and realities. Plenary paper published in the Proceedings of The 2001 International Congress and Exhibition on Noise Control Engineering; 2001.
78 World Health Organisation. Global recommendation for physical activity for health; 2010.
79 Pistoll C, Furler J. Transport on prescription: How can GPs contribute to the promotion of active transport? Aust Fam Physician 2017;46:783-8.
80 Götschi T, Garrard J, Giles-Corti B. Cycling as a part of daily life: a review of health perspectives. Transport Reviews 2016;36:45-71.
81 Rérat P. Cycling to work: Meanings and experiences of a sustainable practice. Transportation Research Part A: Policy and Practice 2019;123:91-104.
82 Hamer M, Chida Y. Active commuting and cardiovascular risk: A meta-analytic review. Prev Med 2008;46:9-13.
83 Berger AT, Qian XL, Pereira MA. Associations Between Bicycling for Transportation and Cardiometabolic Risk Factors Among Minneapolis-Saint Paul Area Commuters: A Cross-Sectional Study in Working-Age Adults. Am J Health Promot 2018;32:631-7.
84 Celis-Morales CA, et al. Association between active commuting and incident cardiovascular disease, cancer, and mortality: prospective cohort study. BMJ 2017;357:j1456.
85 Krizek KJ. Measuring the wind through your hair? Unravelling the positve utility of bicycle travel. Research in Transportation Business & Management 2018;29:71-6.
86 Höchsmann C, et al. Effect of E-Bike Versus Bike Commuting on Cardiorespiratory Fitness in Overweight Adults: A 4-Week

Randomized Pilot Study. Clin J Sport Med 2018;28.
87 Mueller N, et al. Health impact assessment of active transportation: A systematic review. Prev Med 2015;76:103-14.
88 Kriit HK, et al. Health economic assessment of a scenario to promote bicycling as active transport in Stockholm, Sweden. BMJ Open 2019;9:e030466.
89 Rerat P, Giacomel G, Martin A. Au travail à vélo... La pratique utilitaire de la bicyclette en Suisse. Neuchâtel: Éditions Alphil-Presses universitaires suisses; 2019.
90 Colville-Andersen M. Copenhagenize, The definitive guide to global bicycle urbanism. Washington: Island Press; 2018.
91 Elvik R, Bjørnskau T. Safety-in-numbers: A systematic review and meta-analysis of evidence. Safety Science 2017;92:274-82.
92 Nieuwenhuijsen MJ, Khreis H. Car free cities: Pathway to healthy urban living. Environ Int 2016;94:251-62.
94 Degros A. Traffic Space is Public Space! GeoAgenda 2018;1:18-21.
94 Mueller N, Haneen Khreis DR-R, Cirach M, et al. Changing the urban design of cities for health: the superblock model. Environ Int 2020;134:105132.
95 Brown V, et al. A systematic review of economic analyses of active transport interventions that include physical activity benefits. Transport Policy 2016;45:190-208.
96 Mulley C, et al. Valuing active travel: Including the health benefits of sustainable transport in transportation appraisal frameworks. Research in Transportation Business & Management 2013;7:27-34.
97 World Health Organization – Europe. Health economic assessment tools (HEAT) for walking and for cycling. Economic assessment for transport infrastructure and policies. Methodology and user guide. 2014 update; 2011.
98 Noémie S. Estimation de l'impact économique des effets sur la santé des interventions affectant la marche et le vélo à Lausanne avec l'outil HEAT de l'OMS. Université de Lausanne, Faculté des sciences sociales et politiques; 2019.
99 Dill J, McNeil N. Four Types of Cyclists?: Examination of Typology for Better Understanding of Bicycling Behavior and Potential. Transportation Research Record 2013;2387:129-38.
100 Patnode CD, et al. Behavioral Counseling to Promote a Healthful Diet and Physical Activity for Cardiovascular Disease Prevention in Adults Without Known Cardiovascular Disease Risk Factors: Updated Evidence Report and Systematic Review for the US Preventive Services Task Force. JAMA 2017;318:175-93.
101 US Preventice Services Task Force. Healthy Diet and Physical Activity for Cardiovascular Disease Prevention in Adults Without Known Risk Factors: Behavioral Counseling; 2020. Disponible sur : www.uspreventiveservicestaskforce.org/uspstf/document/final-research-plan/healthful-diet-and-physical-activity-for-cardiovascular-disease-prevention-in-adults-without-known-risk-factors-behavioral-counseling-2021.
102 Yang L, et al. Interventions to promote cycling: systematic review. BMJ 2010;341:c5293.
103 Vuori I. Promoting cycling: a review of interventions. Clin J Sport Med 2011;21:542-4.
104 Borges PAV, Gabriel R, Fattorini S. Biodiversity Erosion: Causes and Consequences. In Leal Filho W, et al. Life on Land. Cham: Springer International Publishing; 2019. p. 1-10.
105 Résumé à l'intention des décideurs du rapport sur l'évaluation mondiale de la biodiversité et des services écosystémiques de la Plateforme intergouvernementale scientifique et politique surla biodiversité et les services écosystémiques. 2019.
106 Almond REA, Grooten M, Petersen T. Bending the curves of biodiversity loss. In Living Planet Report 2020. WWF, Zoological Society of London; 2020.
107 Seibold S, et al. Arthropod decline in grasslands and forests is associated with landscape-level drivers. Nature 2019;574:671-4.
108 Connecting global priorities: biodiversity and human health. A state of knowledge review. 2015.
109 Paul A, Sandifer AES-G, Bethney P. Ward, Exploring connections among nature, biodiversity, ecosstem services, human health and well-being: opportunities to enhance health and biodiversity conservation. Ecosystem Services 2015;12:1-15.
110 Caroline ML; Mackay MTS. Do people who feel connected to nature do more to protect it? A meta-analysis. J Environ Psychol 2019;65:101323.
111 Maller C, et al. Healthy nature healthy people: « contact with nature » as an upstream health promotion intervention for populations. Health Promot Int 2005;21:45-54.
112 Hughes J, et al. In a mental-health care setting, can nature conservation and health priorities align? J Interprof Care 2020;4:97-106.
113 Rook GA. Regulation of the immune system by biodiversity from the natural environment: An ecosystem service essential to health. Proc Natl Acad Sci U S A 2013;110:18360-7.
114 Hughes J, Ryan Lumber MR. Evaluating connection to nature and the relationship with conservation behaviour in children. J Nat Conserv 2018;45:11-9.
115 Haahtela T. Why medical community should take biodiversity loss seriously? Porto Biomed J 2017;2:4-5.
116 Twohig-Bennett C, Jones A. The health benefits of the great outdoors: A systematic review and meta-analysis of greenspace exposure and health outcomes. Environ Res 2018;166:628-37.
117 Tillmann S, et al. Mental health benefits of interactions with nature in children and teenagers: a systematic review. J Epidemiol Community Health 2018;72:958-66.
118 Engemann K, et al. Natural surroundings in childhood are associated with lower schizophrenia rates. Schizophr Res 2020;216:488-95.
119 Hartig T, Sjerp de Vries RM, Frumkin ., Nature and health. Ann Rev Public Health 2014;35:207-28.
120 Frumkin H, et al. Nature Contact and Human Health: A Research Agenda. Environ Health Perspect 2017;125:075001.
121 Laerke M, Kjeldsted E, Hatmeyer R, Bølling M, Bensen P. Mental, physical and socialhealth benefits of immersive nature-experience for children and adolescents: a systematic review and quality assessment of the evidence. Health Place 2019;58.
122 Frumkin H. The evidence of nature and the nature of evidence. Am J Prev Med 2013;44:196-7.
123 Diana E, Bowler LMB-A, Knight TM, Pullin AS. A systematic review of evidence for the added benefits to health of exposure to natural environments. BMC Public Health 2010;10.
124 Hale J, Knapp C, Bardwell L, et al. Connecting food environments and health through the relational nature of asethtics: gaining insight through the community gardening experience. Soc Sci Med 2011;72:1853-63.
125 Lin BB, Egerer MH, Ossola A. Urban Gardens as a Space to Engender Biophilia: Evidence and Ways Forward. Front Built Environ 2018;4.
126 Araújo D, et al. The empowering variability of affordances of nature: Why do exercisers feel better after performing the same exercise in natural environments than in indoor environments? Psychol Sport Exercise 2019;42:138-45.

127 Kellert SR. Biophilia. In Jørgensen SE, Fath BD. Encyclopedia of Ecology. Oxford: Academic Press; 2008. p. 462-6.
128 Kaplan S. The restorative benefits of nature: Toward an integrative framework. J Environ Psychol 1995;15:169-82.
129 Ulrich RS. Aesthetic and affective response to natural environment. In Wohlwill IAJ. Human Behavior and Environment. New York: Plenum; 1983. p. 85-125.
130 Haahtela T, et al. The biodiversity hypothesis and allergic disease: world allergy organization position statement. World Allergy Organ J 2013;6:1-18.
131 Hanski I, et al. Environmental biodiversity, human microbiota, and allergy are interrelated. Proc Natl Acad Sci U S A 2012;109:8334.
132 Ruokolainen L, et al. Green areas around homes reduce atopic sensitization in children. Allergy 2015;70:195-202.
133 Aerts R, Honnay O, Van Nieuwenhuyse A. Biodiversity and human health: mechanisms and evidence of the positive health effects of diversity in nature and green spaces. Br Med Bull 2018;127:5-22.
134 Bloomfield SF, et al. Time to abandon the hygiene hypothesis: new perspectives on allergic disease, the human microbiome, infectious disease prevention and the role of targeted hygiene. Perspect Public Health 2016;136:213-24.
135 Flies EJ, et al. Biodiverse green spaces: a prescription for global urban health. Frontiers in Ecology and the Environment 2017;15:510-6.
136 Ossola A, et al. Lost food narratives can grow human health in cities. Frontiers in Ecology and the Environment 2018;16:560-2.
137 Alaimo K, et al. Amplifying Health Through Community Gardens: A Framework for Advancing Multicomponent, Behaviorally Based Neighborhood Interventions. Curr Environ Health Rep 2016;3:302-12.
138 Soga M, Gaston KJ, Yamaura Y. Gardening is beneficial for health: A meta-analysis. Preventive Medicine Reports 2017;5:92-9.
139 Bragg R, Atkins G. A Review of nature-based interventions for mental health care. Natural England, NECR NECR204; 2016.
140 Leavell MA, et al. Nature-Based Social Prescribing in Urban Settings to Improve Social Connectedness and Mental Well-being: a Review. Curr Environ Health Rep 2019;6:297-308.
141 Li Q. Effets des forêts et des bains de forêt (shinrin-yoku) sur la santé humaine: une revue de la littérature. Sante Publique 2019;1(HS):135-43.
142 Husk K, et al. Participation in environmental enhancement and conservation activities for health and well being in adults: a review of quantitative and qualitative evidence. Cochrane Database Syst Rev 2016.
143 Callicott JB. Ethique de la terre. Paris: Wildproject; 2010.
144 Audier S. L'Âge productiviste : hégémonie prométhéenne, brèches et alternatives écologiques. Paris: La Découverte, 2019.
145 Lenzen M et al. The environmental footprint of health care: a global assessment. Lancet Planet Health 2020;4:e271-e279.
146 Eckelman MJ, Sherman JD, MacNeill AJ. Life cycle environmental emissions and health damages from the Canadian healthcare system: An economic-environmental-epidemiological analysis. PLoS medicine 2018;15:e1002623.
147 Delorme H, Gonzalez Holguera J, Niwa N, et al. Cobénéfices de la promotion de la santé sur le réchauffement climatique. L'exemple de l'alimentation et de la mobilité. Rev Med Suisse 2020;16:1049-55.