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The nexus: Nutrients – Human Diet – Health – Physical Environment

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Improved global data allows for a new understanding of the impact of what food we produce, eat and dispose of for the environment, human health and Nature's resources. The rapid population growth and urbanization make clear cities pivotal impact on urban as well as all agricultural areas in this century. Today, it is not famine that worries urban residents, but the food sector's contribution to climate change, biodiversity loss and harmful chemicals as well as poor human health. Therefore, their food demand rather than farmers, fishermen or loggers will be guiding remedial measures to be taken by individuals, industry and the public sector. Some 17 million people die each year due to poor diets, more than double the 7 million deaths since the onset of the COVID-19 pandemic. A return to more plant-based diets with unchanged intake of proteins and less calories, sugar, salt and fat combined with less red meat and ultra-processed food would reduce foremost non-communicable diseases and prolong life. Eating less meat-based diets and more soilless food, as well as reducing food waste and recycling urban-disposed nutrient as fertilizers could reduce agriculture's land use by 50 to 70 per cent while still securing a healthy food supply. Thus, we could avoid the current clearing of new fields needed under a business-as-usual regime. Less land under cultivation and pasture would allow Nature to reclaim more areas in order to catch carbon and rejuvenate biodiversity. Smart cities fitted with infrastructures to recycle macro- and micro- nutrients and organic matter will also ameliorate human-induced impacts such as emissions to air and water bodies, reverse crossing other planetary boundaries, and reduce polluting extraction of N, P and K. Rapid results are within reach since dietary change and the turn-around time of nutrients in food is very short: months rather than decades or centuries as for recycled materials in cars or buildings.

Biography

Dr. Jan-Olof Drangert is em. Assoc. professor at Linköping University. His area of studies started with water issues in rural areas, then to urban sanitation challenges, and presently global environmental impacts of food systems. He has published more than 50 articles in reputed journals and has been serving as Guest Editor to several publications